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Communications.

ARTIFICIAL SULPHUR WATER, AS A SUBSTITUTE FOR BERGEON'S TREATMENT OF PHTHISIS.

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Almost from time immemorial, waters of various sulphur springs have been used in the treatment of disease with more or less pronounced advantage. It is indeed notorious that many cases which have failed to yield to the most skilful home treatment have more or less imperfectly recovered at such springs. Experience has shown that especially three classes of cases are benefited. First, all forms of chronic gout; second, various forms of mucous catarrhs, including some cases of so-called consumption; third, skin diseases.

It will be remembered that when Bergeon inaugurated the system of rectal injections which has created so much excitement in the treatment of phthisis, the main agent which he employed was natural sulphur water. The carbonic acid bubbling through this carried over with it an uncertain amount of sulphuretted hydrogen, which was undoubtedly the active agent. Both in France and in this country artificial solutions have been substituted with advantage for the natural sulphur waters used by Bergeon, such artifical solutions yielding the sulphuretted hydrogen more freely than did the natural waters. I think it may be considered as established, that in many cases of consumption Bergeon's treatment has yielded very extraordinary results. That these results are not achieved by any specific action upon the tubercle bacillus is shown by the fact that the bacillus does not disappear from the sputa, and especially by the fact that bronchorrhœa and other pulmonic catarrhs not dependent upon the presence of the tubercle bacillus, are affected even more pronouncedly for good by the sulphuretted hydrogen than are the cases of true phthisis. It would seem, indeed, that the experience with the Bergeon's method is precisely in accord with that obtained at the various sulphur springs, namely, that sulphuretted hydrogen is a valuable remedy in the treatment of pulmonic catarrhs. The disadvantage of the Bergeon's method is the cost of the apparatus, the time and assistance required for the administration of the injection and the colicky pains which are not rarely produced. The advantages of the method over the administration of the gas by the mouth are not clear. It is simply absurd to suppose that it can make any difference in the action of sulphuretted hydrogen upon the general system or the pulmonic mucous membrane, whether it is absorbed, through the colon or through the small intestine. In either case the gas, as soon as absorbed, enters the portal circulation and passes by exactly the same route to the lungs. A further objection which might well be urged against the rectal administration is the impossibility of judging of the amount of sulphuretted hydrogen which is introduced into the bowels.

If a natural sulphur water is employed, the gas must vary indefinitely, and always be in very small amount in proportion to the carbonic acid. When an artificial solution is used, and the production of sulphuretted

hydrogen depends upon the reaction between the carbonic acid gas and certain ingredients in the solution, more of the gas enters the patient, but the amount is still uncertain. The activity of chemical reactions notoriously varies with the temperature of solutions and with other circumstances still less readily controlled. Led by these considerations, I, some weeks ago, commenced the administration of sulphuretted hydrogen water by the mouth in pulmonic catarrhs, phthisis, etc., and have found that it yields precisely the same results as does the Bergeon's method of treatment. In a few instances the water disagrees with the stomach, but this is unusual; in such cases the rectal injections may be employed.

Water saturated at ordinary temperatures by sulphuretted hydrogen should contain between two and three times its bulk of gas. If allowed to stand, chemical decomposition occurs, with the deposition of sulphur and a marked reduction in the strength of the solution. The solution should therefore always be freshly prepared, not more than two, or at the most three days old. Its odor is of course excessively unpleasant, but its taste is not correspondingly disagreeable, and given in carbonic acid water, few of my patients have objected to it.

At my suggestion, Dr. John Marshall, of the Chemical Laboratory of the University of Pennsylvania, has prepared an apparatus which is so simple that any one, by means of it, can manufacture at an entirely nominal cost, a water which is saturated both with carbonic acid and sulphuretted hydrogen, and which affords an excellent method of administration. Of this water one to two ounces may be given three or four times a day. The cost of the apparatus, boxed for shipment, is only $5.00, so that it is within the means of almost any patient.

This artificial sulphur water will probably be found efficient in all affections in which the natural sulphur waters do good. I have tried it with good results in one case of chronic gout.

Dr. Marshall has also prepared for me an apparatus for impregnating large quantities of water with sulphuretted hydrogen for bathing purposes, so that it is now possible to order for wealthy patients a complete sulphur treatment at home. Perhaps it is just as well to call attention to the fact that the sulphur vapor baths extensively used are not sulphur or sulphurated hydrogen baths, but sulphurous acid baths, and sulphurous acid is no more sulphur than nitrous acid is nitrogen.

A CASE OF PUERPERAL UTERINE RUPTURE.

BY H. V. SWERINGEN, A. M., M. D.,
Of Fort Wayne, Indiana.

I have, in a previous contribution, expressed the opinion that it is the duty of the physician to report his failures as well as his successes. If, however, the number of critical, difficult cases be greater than should fall under the professional care of any single practitioner, the *proviso* that the failures be not in excess of the successes, may, with no little propriety, qualify said duty or its enforcement.

I had thought that I had had about every manner of case that could be found within the covers of the most recent standard treatises on the subject of midwifery, with the exceptions of the Cæsarian section, inversion of the uterus, and extra-uterine fœtation. But a recent case has undeceived me in this respect, and added to my obstetric record an entirely new experience.

Prudence would naturally suggest that a case of puerperal uterine rupture had better remain unreported, especially when the opinions of some of our authorities in regard to these cases are considered, as for instance, the following from the pen of Cazeaux:

"I repeat, therefore, that spontaneous rupture of the uterus is an event of rare occurrence, whilst lacerations produced by the manipulations required in turning, or the introduction of an instrument, are comparatively common. I have met with but a single case of spontaneous rupture; but, unfortunately, have seen quite a number of traumatic lacerations resulting from badly performed operations. The most skillful operator, without any fault of his own, may be the involuntary cause of rupture and cannot be justly censured; yet it is nevertheless true, that almost all such occurrences are the immediate consequence of want of skill or the use of too great force in the introduction of the hand or an instrument. Facts of this nature cannot be repeated too often, for they are calculated to render young physicians, who intend to practice midwifery, more cautious; and to convince them that to have attended two or three women in labor is not all that is needed to render them capable of performing the most difficult operations of our art."

It will be seen by the foregoing quotation that our author is very strongly inclined to the opinion that the great majority of the cases of uterine rupture that have occurred

might have been prevented. However well founded such an opinion may be, it shall not deter me from reporting an additional one—the first to occur in my practice, and in over a thousand cases of labor attended.

The junior members of the profession are entitled to a knowledge of, but rarely have the advantage of profiting by, the unsuccessful practice of their elders, for the reason that the successful experience of the latter only is recorded or in any way revealed, while that which is more or less open to criticism, clouded by unwarranted procedure, or followed by serious or fatal results, is kept hidden not only from the profession at large but in many instances from the patient and friends, and is henceforth known to none save the professional attendants, the fatal results being by them attributed to causes and conditions wholly foreign to the cases.

That the opinions of authors, as of the herein mentioned writer, have not a little to do in preventing many an interesting case from seeing the light of day, or from coming to the surface of the great ocean of clinical experience and being recorded in our various journals, must be obvious to all. But authors are not always right in their opinions, correct in their judgment, or sound in their inferences.

We are too apt to conclude that because we see this or that opinion or statement in *print*, published in "*royal octavo*," bound in the highest style of the art, its title-page bearing the most recent date—the doctrines therein promulgated must be true. No idea could be more erroneous. It is wonderful the respect we pay to type and printers' ink, wholly unmindful of the fact that books partake largely of the imperfections of their creators.

> "'Tis pleasant sure to see one's name in print:
> A book's a book tho' there is nothing in't."

Upon the question now under consideration, when I am reminded of the many exhibitions of wonderful force exerted by the healthy uterus; when I reflect upon the almost incredible degree of power which must be exerted in the performance of traction in certain cases of forceps delivery, and remember that the womb is capable of exerting the same and greater force in its efforts at expulsion in the majority of cases; when I contemplate the almost superhuman power possessed by a perfectly normal womb independent of any volition upon the part of the parturient woman, acting as intelligently and forcibly as if endowed with a mind of its own: I say, when I think of what a healthy womb has done, and is capable of doing in its natural, physiological condition, I not only agree with Professor Cazeaux in saying that "spontaneous rupture of the uterus is an event of rare occurrence," but go further and assert (as my belief) that it *never* occurs in a perfectly normal organ in a labor otherwise normal; that when rupture does occur its cause will invariably be found to depend upon some degenerative changes, some retrograde or other metamorphosis, some alteration of structure, slight or extensive, of the womb itself, and that the usually very tender, mild, timid, often insufficient, fearful-of-doing-some-harm attempts of the young and inexperienced obstetrician to deliver an abnormal case, are but the irresponsible, irremediable, innocent causes—if causes at all—having no more to do with the result than the unaided efforts of nature herself, or other than to excite a manifest predisposition to, or constitute an unavoidable factor in, the production of an immediate rupture.

I have thus prefaced the report of my case in order to encourage the youger members of the profession to hesitate no longer in reporting and commenting upon similar cases, for fear of being censured for want of skill, and also by reason of the fearfully increasing amount of torture to which more especially the American womb is subjected in every conceivable manner for the purpose of preventing conception or of destroying its product. For it is reasonable to predict that these cases will become much more prevalent, and in time form a more important question in the domain of midwifery and gynecology.

At this very moment the writer hereof is cognizant of the fact that a lady (?) moving in the upper strata, if not in the uppermost stratum of society, fully equipped with tents and applicators and other instruments known only to the profession and the initiated, is at work upon herself, having with the same implements upon a previous occasion succeeded in the accomplishment of her object, her physician having yielded to her request for the production of an abortion to the extent only of instructing her how to perform it upon herself. Can it be denied that this practice long-continued will predispose to structural change and seriously compromies the integrity of uterine tissue? This is a question not only for the profession to consider, but it should command the gravest attention of the pulpit and of the bar. It is not at all unwise or improbable to conclude that those parents who resort to all manner of means of preventing and of destroying the product of conception, are more apt to

lose what children they have permitted to come and grow up, and to whom they are so fondly attached, and upon whom they would be glad to lean and depend for support and comfort in their declining years.

The Case.—On Friday night, March 4, 1887, I was called to see Mrs. McNamara, who, it was thought, was in labor, having had slight pains during the whole of the day. The history gleaned from the messenger (the husband), was that her first confinement occurred in Ireland, and was followed by milk-leg, from which she never fully recovered, having ever since had a sore leg, which would alternately break and heal. Her first child lived but a few months. Her second child, now living, a boy 15 years old, seems in good health. Since she came to this country she has given birth to five still-born children in succession and at full term, and has had several miscarriages and false conceptions. Her labors have always been exceedingly slow and tedious, her pains very weak, feeble, and inefficient.

Reaching her bedside in a few minutes, a mere glance at her general physique was sufficient to satisfy me that the prospect for another still-birth was very favorable indeed, unless she was delivered by forceps the moment they could be applied. She was about 43 years old, weighed two hundred pounds, and, as I am informed by a neighbor, drank considerable beer. To the inexperienced accoucheur she would appear to be of the shape and form best calculated to insure a speedy, easy delivery; but I have long since learned to regard the thin, spare, wiry women as the best conservators of my time, trouble, anxiety, and patience in the lying-in chamber. My patient in the present instance was one of those fat women whose muscles are soft, boggy, baggy, relaxed, wanting in tonicity or resiliency, and who require for weeks or months before confinement such remedies as the phosphates, strychnia, etc.

On making a digital examination I discovered a very roomy pelvis, nothing abnormal in its dimensions, the os high up, retracted, indrawn, but undilated, the womb surrounding it in a boggy, soft condition I was ununable to touch any portion of the child. By inspection of the abdominal contour I suspected a transverse presentation, which immediate palpation confirmed, the head being felt on the right above the pelvic brim, and the breech on the left. The woman's pains were aggravating, but accomplished nothing, and could not with a presentation of this character. By external manipulation, I succeeded in getting the head more antero-vertically, but failed to make it engage in the superior strait. I then left her, hoping that nature would correct the position of the child by the time the os should become sufficiently dilated to require my presence.

On the following night, at about the same time, I was again summoned, when I found her in about the same condition as when I left her, except that, notwithstanding her pains were no stronger, the os was dilated and dilatable, being open to the extent of about a dollar or more; but no part of the child could be reached. The line of procedure I had now determined upon was to endeavor, by a external pressure upon the head down toward the superior strait, to apply the long Hodge forceps and deliver by traction, as in an ordinary forceps delivery. But an object so much-to-be-desired was more difficult of accomplishment than it at first appeared to be, and I reluctantly abandoned it for a procedure I feared would be still more difficult, that of version, which, however, was easily and speedily performed so far as the body and arms were concerned, but I had great and unusual difficulty with the head, which I finally delivered with forceps.

Imagine my horror when, upon introducing my hand to extract the placenta, it came in contact with the intestinal surface. A knowledge of what had happened passed through me like an electric shock. It was the most sensitive touch I ever experienced, and was not calculated to be an "antiphlogistic touch," either. There was my hand upon her bowels! Turning the palm upward, I quickly made out the contour of the posterior wall of the womb, feeling not unlike an inflated rubber bag of the size and nearly the shape of an ordinary sized ham, if not larger, no contraction as yet having occurred although there was no hemorrhage.

Withdrawing my hand, I made another and more successful effort to reach the fundus, where I found the placenta as intimately connected with it as Chang was to Eng—the memorable Siamese twins. No cleft, no fissure, no division, not a line of separation or of demarcation could I distinguish by touch: nothing hanging loose but a few shreds of the membranes and the cord. The rupture occurred in the posterior-inferior portion of the womb, through the supra-vaginal segment, but just *when* it occurred I am at a loss to determine, for at no time was there any very special, decided, or pronounced

sign or symptom of shock or collapse, or any great complaint of pain. During the turning, which was very soon and easily accomplished, I let her inhale a little chloroform, but she soon recovered from its effects. I announced to the husband and friends what had happened, gave her a half grain of morphine hypodermically, placed hot bottles around her, and directed the husband to send for his priest, informing him that she was liable to sink in a very short time. She vomited several times in the course of an hour, was quite thirsty, skin cool, and but once or twice complained of a slight burning pain in the abdomen and back. She soon rallied from the shock, asked for beer frequently, talked and joked cheerfully at times, had no chill, temperature remained normal with a tendency to subnormal, pulse weak, feeble, at times hardly perceptible. She remained in about this condition until about the thirty-sixth hour, when her lungs and bronchial tubes began to fill up—she had had bronchitis for several weeks, with a harassing cough—and in the forty-eighth hour after delivery she died in collapse. A post-mortem examination was not granted me; I was *very* desirous of preserving her womb. I immediately addressed letters to Dr. W. P. Whery, of Fort Wayne, and Dr. Frank Greenwell, of Huntertown, Allen county, Ind., who were her former attendants, the former in one and the latter in three accouchements, who have kindly furnished me with data and their opinions concerning her case, and the unfortunate result of her present lying-in; but as this report has already grown far beyond the limits originally allowed it, I shall not, for the present at least, publish their kind letters. Suffice it to quote the following from Dr. W. P. Whery's letter: "Remembering the powerlessness of the uterine muscle on this occasion, I am not surprised to hear of a rupture of the walls. It is probably one of those cases where atrophy is combined with a dilated cavity. The atonic condition of the uterus probably accounts for the frequency of abnormal presentations in this patient's history." Dr. Whery was with her forty-eight hours in the confinement above referred to. The following I quote from Dr. Greenwell's letter: "I attended her again January 14, 1882; the labor was slow; the pains were not strong, but the vertex presented, and as soon as the second stage of labor was reached I gave ergot, and was rewarded for my efforts to encourage delivery by having a dead child to turn over to the family. However, I do not think the ergot had anything to do with the loss of the child. The placenta came away all right, but was in a degenerate condition, showing here and there evidences of an excess of fatty matter. * * * I again attended her May 15, 1883, with the same result as above. The first time I attended her was January 27, 1880, at which time the result was also the same as of the last two deliveries. I think I recall the story of a fall having occurred before the last time I attended her."

ON THE COMBINATION OF IRON WITH SODIUM SALICYLATE IN RHEUMATISM AND RHEUMATIC AFFECTIONS.

BY SOLOMON SOLIS-COHEN, A. M., M. D.,

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For some four years I have been in the habit, in certain classes of rheumatic affections, usually chronic, of employing a combination of tincture of chloride of iron and sodium salicylate, prepared according to the following formula, which I have been informed by Dr. Rice, of Bellevue Hospital, New York, and other experienced pharmacists, is the first successful combination of these drugs in an eligible preparation. In the House Pharmacopœias of the Philadelphia Polyclinic, where it was first used in 1883, and of Jefferson Medical College Hospital, it is known as the Mistura Ferro-salicylata:

℞.	Sodii salicylatis,	ʒiv.
	Glycerini,	fʒij.
	Ol. gaultheriæ,	♏xx.
	Tr. ferri chloridi,	fʒiv.
	Acidi citrici,	gr. x.
	Liq. ammonii citrat., (B. P.) q. s.,	fʒiv. M.

The mixture is clear, and is not unpalatable. The usual dose is two fluid drachms in water, three or four times a day. The quantities and proportions of the active ingredients may of course be varied according to the intended frequency of dosage, and other circumstances. In cases which are rather subacute than chronic, it is sometimes given every second hour, until the physiological effects of the salicylate are produced, and then at longer intervals. I have also employed it, with apparently good results, in acute articular rheumatism, and in some cases of acute tonsillitis, especially in that group where the diagnosis is at first in doubt between rheumatic angina and diphtheria. Some of my friends have reported to me

good results in acute rheumatism. Its particular applicability is in that group of patients in whom Dr. Russell Reynolds strongly urges the iron treatment—a recommendation endorsed with equal earnestness by Bartholow—namely, anæmic, delicate, poorly-nourished or broken down individuals, usually old people, children, or adolescents, but met with at all ages, whether the disease be acute, subacute, or chronic. In adults, indeed, as a rule, and quite frequently in children, even when the disease is not plainly chronic, the patient will give a history of repeated acute attacks; or there will seem to have been a long series of recurrences, with intermissions of doubtful health. Recognizing the weight of the testimony in favor of tonic, and especially ferric treatment of such cases, and yet desiring to obtain also the specific action of the salicylic compounds, I succeeded, after several ineffectual trials, in obtaining a clear mixture by the use of the formula given above, and four years' experience, latterly, with the ample material furnished by the Out-patient Department of Jefferson Medical College Hospital, has abundantly confirmed my expectations of its usefulness.

219 *S. 17th Street, May*, 1887.

Medical Societies.

ILLINOIS STATE MEDICAL SOCIETY.

FIRST DAY—MORNING SESSION.

The thirty-seventh annual meeting of this society was held in the M. E. Church, Chicago, Illinois, May 17, 18 and 19, and was called to order at 10:30 a. m. by the vice-president, Dr. Elias Wenger, of Gilman, after which the Rev. Charles H. Conklin offered prayer.

Dr. Wenger spoke of the death of the president, D. W. T. Kirk, of Atlanta.

Dr. J. L. White, of Bloomington, called attention to the fact that it was the first time in the history of the Society that it had been called upon to mourn the death of its presiding officer. He then paid an eloquent and fitting tribute to his memory, and said Dr. Kirk was born October 27, 1833. At the age of eighteen he commenced the study of medicine, and graduated in 1854 from the Louisville University. After his graduation, he came to Illinois and located at Farmer City, where he remained one year, and then removed to Atlanta, where he remained over thirty years, and died March 25, 1887.

It was moved and seconded that the society send resolutions of condolence to the family of the deceased, and that the president's chair be draped in mourning as a mark of esteem.

On motion of Dr. Ingals the report of Dr. White was referred to the Committee on Publication, to appear in the necrological transactions.

Dr. A. Reeves Jackson, of Chicago, delivered the address of welcome, and said to his mind the best *prima facie* evidence of the worth, the intelligence, the high professional standing and conscientiousness of the physician, lies in the fact of membership in his or her local State medical society. Many questions pregnant with interest and importance, in the realms of etiology, pathology and treatment, are apparently as unsettled to day as they were a hundred years ago. This fact, however, should not discourage physicians in the prosecution of their work. He welcomed them in behalf of the entire medical profession of Chicago and vicinity, and extended to them the grasp of the hand. the friendship of the heart, and the hospitalities of the homes of that city.

Dr. E. P. Cook, of Mendota, on behalf of the society, responded in a very appropriate speech.

The Secretary, Dr. W. Graham, of Chicago, read letters of regret from Drs. D. S. Booth, of Sparta, and C. Goodbrake, of Clinton.

Dr. D. B. Brower, of Chicago, then read a paper on

The Practice of Medicine,

calling the attention of the Society first to the new treatment of phthisis, and kindred diseases due to bacteria, by rectal injections of sulphuretted hydrogen, communicated to the Academy of Sciences of Paris, by M. Bérgeon. The literature of the subject for the past year was reviewed extensively. The measure was based upon the physiological fact, established by Claude Bernard, that the introduction of toxic substances per rectum is not so dangerous as their introduction by the mouth, so long as elimination by the lungs is not interfered with. The results of the application of the new method in phthisis are, (1) diminution of cough after a few days; (2) profound modification of the quantity and quality of expectoration; (3) suppression of sweating, and gradual disappearance of moist *râles*, and improvement of the general condition. He then directed attention to the communication of Dr. John H. Skeer, read before the Chicago Pathological Society, on "A Pathognomonic Symptom in

Diagnosis of Tubercular Meningitis," presenting drawings to illustrate the changes which take place in the iris. The symptom to which he alluded is "a small circle which forms in the iris near to and completely surrounding the margin of the pupil. When it begins to appear, it is very distinct, and resembles a wreath of thin white clouds, the edge of which extends to the free border of the iris. In from 12 to 36 hours the whole margin of the iris will be involved, having become of a whitish or yellowish-brown color, and appearing irregular, thickened, and somewhat granular. These changes commence in both eyes simultaneously. This cloud-like appearance is in some cases very evanescent, hence the necessity of examining the iris at each visit. The rings are permanent, and grow narrower and longer with the progressive dilatation of the pupil as the distance advances. After an extensive examination of the literature of the subject no previous record of the symptom could be found, hence the sign might be regarded as a strictly original one by Dr. Skeer. The sign has been observed by several physicians since its discovery, two cases coming under Dr. Brower's personal observation. He next directed attention to the new treatment for tubercular meningitis (which is alleged to be successful), which consists of inunctions of iodoform ointment in large amount. He then drew attention to antipyretics, dwelling somewhat upon the new candidate for public favor, "antifebrin." Antifebrin has an advantage over antipyrin in that it is less expensive, more active, more efficient, and much stronger than the latter. He then considered this drug as a nervine, quoting the literature on the subject and the results of its use in certain cases of epilepsy which it benefited when the bromide of potassium had failed. Favorable reference was made to the application of antipyrin in arresting hemorrhage, and in headache, especially hemicrania, and its results were compared with those of other remedies; the dangerous depression following the use of antipyrin was also touched upon, showing that it is an agent which must be used with the greatest caution. The treatment of insomnia by the new hypnotics, urethan and paraldehyde, and especially the former, was next alluded to, Dr. Brower speaking of the reputation that urethan has recently acquired in the treatment of tetanus, several cases being reported as having recovered under its use. In one instance the urethan was combined with chloral. Experience teaches that urethan should be administered in large doses in order to secure the desired effect.

Adjourned.

FIRST DAY—AFTERNOON SESSION.

The society re-assembled, pursuant to adjournment, and was called to order at 2:20 p. m.

Dr. P. H. Oyler, of Mt. Pulaski, read a paper on

Diphtheria,

and expressed his belief that, like scarlet fever, small-pox, and other zymotic affections, it is due to a specific virus; that it is both contagious and infectious, but not in the same sense that scarlet fever and measles are. The exact mode of contagion is unknown. The statement that the disease may be local or constitutional in its origin is not only vague and unsatisfactory, but misleading. Whether the poison is introduced into the circulation by contact with mucous membranes or with the pulmonary capillaries—in either case the origin is local in character. True diphtheria is a zymotic affection, and every theory to the contrary must fall to the ground. The assertion that it attacks only unhealthy mucous membranes is groundless. He had not investigated the nature of the virus chemically, but, from observations and convictions, he bases his treatment upon somewhat different reasoning than that almost universally accepted. No one will deny that cholera is a zymotic disease. He had been taught that in cholera there exists a super-acidity of the blood, and believes that in all other zymotic diseases there exists a super-alkalinity of the blood to a greater or less degree. Assuming, then, that there is an acid condition in the development of the disease, the remedial agent which would meet all the indications and requirements of the case should be sought for and used. Since 1880 he had been using the carbonate of ammonia, jaborandi, benzoate of soda, etc., about the throat, and his results have been satisfactory. He had given the carbonate of ammonia in doses of from 30 to 50 grains. Carbonate of ammonia and benzoate of soda destroy the germ and the medium in which it thrives. Given with milk it stimulates the strength of the patient.

Dr. E. Fletcher Ingals, of Chicago, said he had a few words to say with reference to the first paper presented, and in regard to the new method of treating phthisis. He could not look upon it as a cure by any means. Of the cases in which he had used the gas, the other treatment had been continued as though the new method had not

been employed. He had seen the temperature go down, and within four or five days the sweating cease and the expectoration gradually diminish. However, the temperature in one case had risen again, and things looked badly. One of his patients was unable to take the gas for any length of time on account of the laryngeal symptoms having become worse. It should be distinctly understood that there are dangers to be guarded against in the administration of sulphurous acid gas.

With regard to the paper on diphtheria, the treatment was novel. He had found, however, as he thought the writer himself had, that the treatment in some cases was peculiarly successful from the fact that in going through hundreds of cases in certain epidemics of diphtheria only a few patients were lost; at any rate, such reports were recorded. The old-fashioned treatment of the disease he thought had been more satisfactory. The tincture of iron is a valuable remedy; and gargles and spray are also undoubtedly of great value; but nothing which is liable to exhaust the patient should be used. He thought large doses of carbonate of ammonia would be offensive to a child.

Dr. J. A. Robison, of Chicago, spoke of the sulphurous waters, and said he had given preference to the natural mineral waters, while he understood that Dr. Ingals expresses himself as being better satisfied with the natural water. He would ask Dr. Ingals if he has tested the gas chemically.

Dr. Ingals replied in the negative.

Dr. N. S. Davis said, "I have but a few words to say with regard to the treatment of consumption by Bergeon's method, for I have had no personal experience with it. I do, however, once in a while, get access to the history of cases treated by this method, and will simply relate a case. A young man, well developed, in the suppurative stage of tuberculosis, came to my office: he had been using Bergeon's treatment regularly for ten days, and, according to his report, instead of progressing in the usual way, the expectoration, etc., diminishing, he insisted that his expectoration was increasing, and that he had received no benefit whatever. He only used it for ten days. I encouraged him to continue its use longer; for I consider ten days no fair test. I mention the fact simply to show that in diminishing the night-sweats, and the amount of expectoration, the gas has not been acting in accordance with the results usually obtained. I rise to inquire in discussing remedies for any of the acute febrile diseases whether we are not too apt to keep up an inquiry to find some remedy or some combination of remedies that are to be commenced and given the patient from beginning to end? Most of what I hear is, one man advocates the tincture of iron as the best remedy, another carbonate of ammonia in big or little doses, while still another puts in calomel apparently from beginning to end, and all for the same purpose. Each one has some leading remedy, and something to prop it up on either side. Now, it does seem to me in my experience that these febrile disorders have a definite progress. They present conditions of circulation, general tone, susceptibilities of the system, conditions of secretion—conditions in the exudative products essentially different from each other—as they progress. I have attended a great many cases of diphtheria in former times, and have been through a fair number of epidemics of the disease; some of them were very severe—so severe that I have seen four children in the same family laid on the same table ready for burial. Epidemics differ in their severity, their tendencies, fatality, and their varying amenability to treatment is very evident.

When I have come to a case of diphtheria at the beginning, I find most frequently a dry skin, and a tendency to the checking of secretions. Now, after four or five days have elapsed, the exudation not only on the membranes, but the glands of the neck becomes tumefied, and in a short time it has reached its culminating point. If you watch your patient closely, irrespective of any remedy, paying no attention to medicine, when it has reached that culminating point, you will begin to find a change in the taint of your patient's breath. You will find during the next twenty-four hours after that, if the patient lives, signs of disintegration; you have come to a culmination of the active progressive stage of the disorder, and you begin to notice now what I call the commencement of the stage of suppuration. The membranes and tissues break down, pulse is more rapid, and small ulcers appear in the membrane. There may be in addition offensive muco-purulent discharges from the nostrils and the throat. If remedies are given in the first stage of the disease they are highly beneficial; they tend to promote the natural secretion, diminish the tone of the fever, hold in check the high temperature. You may use calomel at this stage of the disease. I have never had occasion to use iron or carbonate of ammonia; it works well when used at the commencement. Just as soon as the culminating stage is reached the pulse begins to be softer,

weaker, quicker, and, if the case is a severe one, easily compressed. The patient's countenance begins to look a little less florid—it is leaden in color. Next comes the stage of depression, when you may use carbonate of ammonia, tincture of iron, quinine, or anything that will act in the same direction; you will adjust, in other words, your remedies to meet the pathological conditions and indications of your patient in the different stages of the disease. And one of the most important things for physicians to learn is the exact adaptation of their remedies to the pathological relations and conditions of the successive stages of a disease.

Dr. A. K. Steele, of Chicago, said that Bérgeon's treatment was the live question of to-day, and that while it is not applicable to the cure of consumption, and does not destroy the micro-organism, yet it reduces the quantity of sputum and its offensiveness. After the symptoms of sepsis or blood-poisoning have disappeared to a certain extent, it is of advantage as a germicide. He ventured to predict that its life as a therapeutical agent will be as brief as that of the rectal administration of ether in producing anæsthesia for surgical operations.

Dr. E. Ingals said he was reminded of the old proverb, "A new broom sweeps clean," and the longer he lived the more thoroughly he became convinced of it.

Dr. G. L. Corcoran, of Brimfield, thought there might be something in the new treatment, and that it was unwise to criticise it before it had received a fair trial at the hands of the profession. Stranger things had happened, and by further investigation and experimental research something might be arrived at which will affect the tubercle. In his treatment of phthisis pulmonalis he had found nothing so good as iron and arsenic. He agreed with Dr. Davis regarding the disadvantage of using the tincture of iron too early.

Dr. Steele, chairman of the committee on surgery, then read his report, in which he gave a resumé of the

Progress in Surgery

made during the year, referring to the elaborate experimental researches of Dr. N. Senn, of Milwaukee, on "The Surgery of the Pancreas," which supplied data upon which to base rational methods of treatment for such diseases or injuries of the pancreas as may be amenable to surgical interference. The micro-organisms of acute infecting osteo-myelitis have been identified by Rosenbach, Becker, and others. Recently scrofulous, strumous, malignant diseases, white-swelling, and lupus, have been definitely classified as tuberculosis of bones, joints, or synovial surfaces, and rendered curable by recognition af their pathology. It has been demonstrated that foreign substances in the blood-currents are soon covered with a blood plaque (the white thrombus). When stasis occurs from any cause, the third corpuscle or blood-plaque undergoes transformation, adhering to the white corpuscle and the vessel wall, causing a white thrombus. He then referred to the experiments of Dr. Knapp, of New York, who believes that suppuration is caused by bacteria, and has proven that sterilized solutions of chemical irritants introduced into the blood are not followed by suppuration. Fermentation is the decomposition of carbo-hydrates into simpler compounds by the agency of living microbes. Thoraco-plasty was referred to as having been performed with the result of obliterating old pleural suppurating cavities. Surgical operations on the kidneys are becoming more and more frequent. The operations peformed are: Nephrorrhaphy, or suturing a floating kidney; nephrotomy; nephrectomy. Supra-pubic cystotomy is rapidly gaining favor. With regard to antiseptics, he used solutions of bichloride (1 to 500) freely in washing the field of operation. The spray had been abandoned by him during the last three years. Several cases were reported on which he operated himself, one excision of the hip, two leg amputations, one of thigh, three of shoulder. He followed Schede's method in operations upon bone. He used a primary plaster-cast in simple fractures, while in ununited fractures he drilled the unossified band of callus between the fragments in various directions. If this fails he cuts down upon the ends and fastens them firmly with bone pegs.

Dr. B. F. Crummer, of Warren, reported a case of unique

Wound of the Chest,

the lung being extensively lacerated, and profuse hemorrhage having taken place in the right thorax. Of pleuritic effusion he mentioned several cases, and one case of spontaneous recovery from empyema.

It was moved and seconded that the discussion on surgery take place during the afternoon session of the second day.

Dr. Ellen A. Ingersoll, of Canton, chairman of the Committee on Obstetrics, referred to the signs of pregnancy, saying that during the first eight weeks, the changes in the uterus were practically limited to the body of the organ. These changes constitute what is known as Hegar's sign—increase in the an-

terior curvature of the uterus, with increased elasticity of the uterine walls. She then spoke of the management of the secundines, the general drift of professional opinion being toward immediate removal of the uterine contents when the ovum had been expelled. Antiseptics and forceps were next dealt with. In the treatment of puerperal eclampsia the three important factors to be carried out were sedation, or suspension of the reflex functions of the spinal cord, prompt reduction of arterial pressure, and the elimination of effete matter from the system. Veratrum viride stood very high as a sedative. Extra-uterine pregnancy, dystocia, and premature labor, were referred to, the essayist claiming that latroversion at the beginning of labor was a fruitful measure in overcoming and preventing severe dystocia. Porro's operation as modified by Dr. John Bartlett, of Chicago, was alluded to. A supplementary paper on "Does a Retention of the Secundines Necessitate Septic Poisoning," was presented by Dr. W. H. Connibear, one of the Committee on Obstetrics, and read by Dr. Ingersoll, in the absence of the author.

Dr. C. W. Earle, of Chicago, remarked that Hegar's sign was long since observed; no one had considered it worth while to place it on record but Hegar himself, hence it received his name. During the first six or eight weeks, if pregnancy has taken place, we can detect a bottle-shaped condition of the uterus, and a great many practitioners have probably noticed it long before Hegar's sign was promulgated. There is an undue bulging just above the neck. Those who are expert in detecting it say they can detect this sign as early as the 6th or 7th week. Another sign of early pregnancy (not mentioned in the paper) is the discoloration of the vaginal tissues. As regards the removal of the placenta, etc., it demonstrates the fact that pieces of membranes and clots of blood are perfectly inert, if the woman is not poisoned by the practitioner, the nurse, or by something which she does herself. A little piece of placenta, together with a considerable quantity of blood, may revolve in the uterus, and if the finger of the obstetrician or appliances of the nurse do not infect the woman, these foreign masses are inert. Ask any of the operators of Italy, Austria and Germany, after they have gone through an obstetrical operation, will that woman recover? and they will answer, "Yes, she will recover, if I have not infected her." The question is, are we, as American practitioners, prepared to accept this doctrine?

Dr. O. B. Will, of Peoria, entered his emphatic protest against the use of injections, either intra-uterine or vaginal, immediately after labor. He covered all wounds with iodoform, and applied the pad used by Garrigues, of New York. His results were highly satisfactory. He favors the immediate removal of the secundines.

Dr. S. H. Stevenson, of Chicago, said there were two methods of dealing with the secundines—the conservative and the heroic. She adopted the conservative method, if the patient was under perfect antiseptic control, but if not, the physician was justified in using some violence to the uterus. With regard to the physician or nurse poisoning the patient, it leaves no room for autogenetic poisoning. No physician of experience can doubt that frequently the patient has within her the germs of sepsis, which develop at the puerperal period, without being conveyed to her by doctor or nurse.

Dr. E. P. Cook, of Mendota, favored early removal of the placenta.

Dr. Ingals never used injections, unless there was evidence of decomposition, but relied on nature, and maintained that labor was a normal process requiring little interference.

Dr. G. W. Nesbitt, of Sycamore, thought there should be some rule in regard to the treatment of abortions and retention of the secundines. He favored emptying of the contents of the uterus as early as possible.

Dr. J. H. Hollister, of Chicago, said he had practiced medicine thirty-nine years, and his results were usually very good, relying principally upon the conservative method.

Dr. E. Wing, of Chicago, endorsed the statements of Dr. Earle, that there was no such thing as autogenetic infection.

Papers on obstetrics were referred to Committee on Publication.

Society then adjourned to Wednesday at 10 a. m.

(*To be continued*).

CHICAGO MEDICAL SOCIETY.

Stated meeting, April 18, 1887.

The President, W. T. Belfield, M. D., in the chair.

Discussion on the Treatment of Pulmonary Affections by Gaseous Enemata, with Exhibition of Apparatus.

The President: During the last twenty-five years various specifics for pulmonary tuberculosis have been announced by enthusiastic physicians, and have successively

secured more or less attention from the profession, yet none of these has secured in the hands of others the results claimed by its discoverer. The benzoate of sodium treatment of Rokitansky accomplished nothing in other hands; the phenic acid injections of Déclat were powerless to arrest the disease in any but his own hands; the eucalyptol treatment of Roussel failed in the hands of other investigators. The latest method of treatment—that recommended by Bergeon, of Lyons, after two years careful observation—has, unlike its predecessors, met with almost unanimous approval at the hands of those who have tried it, including physicians in the Paris and Philadelphia hospitals and several practitioners in our own city. Since the method not only promises well, but is also universally accessible to the profession, it has been deemed advisable to present the subject to the members of the Society in a preliminary discussion this evening. There will be presented communications from Bergeon, of Lyons, Bruen, of Philadelphia, as well as the experience of several gentlemen who have used the method in this city.

Dr. Francis J. Crane then read a paper entitled.

Bergeon's Method of Treating Phthisis by Gaseous Enemata.

In January last, the *New York Medical Record* contained an article headed "A New Treatment of Phthisis," which gives a brief outline of Dr. Bergeon's method of administering carbon dioxide mixed with sulphuretted hydrogen gas, and referred to an article published in the *British Medical Journal*, of December 18, 1886. This described in full the apparatus and mode of using it, and stated they had been procuring beneficial results by the method, and that Prof. Cornil, of Paris, had also become an enthusiastic supporter of it. This led me to write to Dr. Bergeon, and in the course of my correspondence, he presented me with an apparatus, as well as with the treatise of Dr. Morel, read before the French Academy last June, and also one by Prof. Cornil. These are so exhaustive that I have embodied in this paper only the essence of both, as follows:

New Treatment of the Diseases of Respiratory Organs and Septicæmia by the means of Gaseous Enemata, according to M. Bergeon's Method. By Dr. V. Morel.—It would seem from the statements of physicians who have tried either to prevent the development or the proliferation of the bacillus, or to destroy it, that it is the one thing which we have to overcome in the treatment of phthisis. In reasoning by analogy with other contagious diseases, as, for instance, cholera and hydrophobia, it might be urged that the bacillus is not the immediate cause of the morbid phenomena of tuberculous affections. It is known that, aside from miliary tubercles, which invade the lungs and are the cause of the patients' symptoms, the gravest phenomena of phthisis are due to the septicæmia, which poisons the patient, and is caused by the suppuration of the tubercles, which, brought in contact with air, undergoes putrefaction and is absorbed into the system. The bacillus works, then, by producing lesions of texture, which become fatal to the organism by rapidly destroying, or, by undergoing softening and absorption, produce septicæmia. To use Darembourg's expression: "The bacillus is nothing, but septicæmia is everything."

In acknowledging that it is not necessary to ascribe to the microbe all of the morbid phenomena of phthisis, it is not less true that its presence is to the organism an incessant and real danger, and that consequently, in endeavoring to discover a remedy for the lesions which it has produced, it is necessary to destroy it, or at least to neutralize its action. For this purpose such agents as sulphuret of hydrogen, bisulphide of carbon, and other antiseptics, mixed with pure carbonic acid, are employed.

Principles of Bergeon's Method.—The first mode of treatment thought of consisted in applying by inhalation some substances having parasiticidal properties. It is known that antiseptic substances are poisonous, when introduced into the arterial system, either directly or by inhalation. Claude Bernard has shown that poisonous gases introduced into the arterial system through the lungs produce toxic effects almost instantaneously. Besides, the antiseptic substances have an irritating action, and this action, operating on diseased lungs, will only increase the existing lesions, while their unpleasant odor arouses a refusal in the patients to their use; this is probably the reason why so little success has been obtained by inhalation in the treatment of phthisis, and is conclusive proof that the introduction of antiseptics by the stomach is preferable; for Claude Bernard has shown that when a poisonous or medicinal substance is introduced into an organ distant from the arterial system—into the digestive tract, for instance—it cannot enter the arterial system, because it is expelled before reaching it. It must pass through the portal system, the hepatic veins, and the pulmonary texture, there to be exhaled, or it can be expelled by the liver with the bile.

It is well established by experiments that the introduction of poisonous substances in the digestive tube may be done without danger by taking certain precautions, of which the most important consist in not injecting too large quantities at once, and not injecting more before the first has been completely eliminated. What avenue ought to be chosen—the stomach or the rectum? In both cases, the medicament will have to pass through the portal vein, the liver, the hepatic vein, the right heart and pulmonary arteries; but we think the rectal way is preferable, for the patient cannot take a dislike to the antiseptic substances on account of their disagreeable odors.

Gaseous Enemata in the Therapeutics of Respiratory Organs, Pulmonary Phthisis, Asthma, Whooping-cough, Bronchitis, Bronchiectasis, Bronchorrhœa, Pulmonary Catarrh. By M. Cornil.—The principle of the action of gaseous injections and of their rapid elimination by the lung, has been given by Claude Bernard. He showed that when sulphuretted hydrogen is injected into the rectum of an animal, the gas is expelled by the lungs; he proved that we can so inject it in almost unlimited quantities, without causing harm; whereas its introduction by inhalation rapidly occasions grave accidents and the animal's death. However, to introduce sulphuretted hydrogen, or any other gas or vapor, into the economy per rectum, for the purpose of destroying the micro-organisms which exist in a number of diseases, it was necessary to find a gaseous vehicle, inoffensive to the economy, and easily tolerated by the bowel.

Carbonic acid gas admirably answers the purpose; it is very easily borne by the colon, rapidly absorbed and afterward expelled by the lung, with the medicinal gas which it holds. This gas itself, in all probability, plays a very important part in this new treatment of pulmonary diseases.

Dr. Bergeon, who inaugurated this method, published a few months ago the first results obtained in the treatment of pulmonary phthisis by this method. Physicians of Lyons, Paris, Geneva and Marseilles who have treated phthisis by the method, have generally obtained a very rapid disappearance of the phenomena of pulmonary suppuration, and progress towards a state of health with all the signs of cure.

Concerning the patients I have treated by this method, I can now assert that the results I predicted three months ago have been achieved. The patients whom I considered cured have no more expectoration, and give on auscultation stethoscopic signs which denote the presence of quiescent cavities, or cicatrized lesions. Some of these patients have been obliged to return to a life of labor; nevertheless their respiratory organs have stood the test, and the amelioration obtained has been permanent.

While many patients whom the expectoration once so exhausted, now have only 3 or 4 grams of sputum a day, at the beginning of the treatment it was from 250 to 300 grams. We have found bacilli, it is true, in the sputa of these patients; yet it remains to be discovered whether these bacilli which continue to exist after the return to health have kept their functional activity or not. Whatever may be the mode of action of carbonic acid introduced by intestinal absorption in the venous blood and afterward expelled by the lung, it can be said from the observation of patients that this gas, filled with proper medicinal substances, greatly modifies the respiratory function, and makes the hematosis more complete and easy. It gives a sensation of well-being, followed by an increase of strength and weight, a diminution of fever and night-sweats.

The following precautions must be observed in giving this treatment. 1. The CO_2 ought to be as pure as possible, so as not to inflame the bowel. That obtained by the reaction of dilute sulphuric acid on the bicarbonate of soda has always been perfectly absorbed by the bowel without producing any toxic effect.

2. The gas should be collected in a receiver from which the air has been expelled.

3. Make the injections just before a meal, or at least three hours after, and never when the patient is weary. It is necessary to be very cautious in experimenting with other medicinal substances, for if, although the sulphuretted hydrogen is inoffensive, other agents, as turpentine, chloral, ammonia, iodine, bromine, ether, etc., may not be, and might be, the cause of an inflammation of the intestinal mucous membrane.

It is not necessary that the dose be large; by injecting twice a day 4 or 5 litres of carbonic acid gas passed through 500 grams of sulphur water, we rapidly notice the disappearance of all the phenomena of pulmonary suppuration, either in its acute or chronic state.

Bergeon's method has been successfully experimented with by Dr. Chantamesse, in his service at St. Antoine Hospital, during the months of August, September and October. The following are his results: "Two patients brought to the hospital suffering with violent attacks of asthma were, half an hour after

the injection with sulpho-carbon vapors, entirely relieved of the dyspnœa. The treatment having been continued for a few days, the breathing was relieved, and the attacks were not repeated during the time they remained." Nine patients giving general and local signs of pulmonary tuberculosis, with tubercular bacilli in the sputa, have obtained very great amelioration from this treatment. The increase of weight has been rapid, one pound, and sometimes as much as 35 oz. a week; cough and expectoration have largely ceased. We always find the bacilli in the sputum, however. These patients have been under treatment for one month and a half. One of them has increased nine pounds in weight.

I have used this treatment in four cases: two of phthisis, one of intussusception of the bowel, and one of spasmodic croup. In the croup and intussusception it operated like a charm, overcoming both almost instantly. In the case of croup I used the bisulphide of carbon, and in half an hour the little patient was sleeping, apparently as well as ever.

Case 1. Mr. W., aged 26. Two sisters and a brother died of phthisis; he had been treated by various physicians and changing climate (having been to Colorado twice) for over three years. The right lung was nearly useless, as it contained a cavity corresponding to nearly if not quite half of its original capacity. Nowhere on this side could vesicular respiration be heard, while the left apex likewise yielded unmistakable signs of disease. There were œdema of the feet, incessant cough, broken sleep, watery stools and ravenous appetite, although he could not retain anything on the stomach; temperature 102° F. After the first injection of bisulphide of carbon, given in the evening, he slept well for three hours, and was bothered very little with cough, but on rising in the morning, to use his own words, he came near strangling for want of a cough, which he finally got, and expectorated a pint in one paroxysm. I then used the sulphuretted hydrogen water and he improved very fast; in one week he had a normal temperature; night-sweats almost entirely stopped; expectoration was much less, and he was able to wear his shoes, which he had not been able to do for over six weeks. Unfortunately, however, at the latter part of the second week he ventured out in one of our rainiest March days, took cold, and his death, two days later, cut short the record of what might have proved almost a miracle.

Case 3. Mrs. W., aged 34, widow, having lost her mother and older sister from phthisis, applied to me for some heart trouble. Complained of a dizzy sensation on rising from a recumbent position; feet swollen; hectic flush; considerable dyspnœa; slight cough with no expectoration. *Diagnosis:* Incipient phthisis with heart complication? She had noticed, also, for about a week, some night-sweats, which did not last, however, after the second administration of gas. She improved so rapidly that she only made seven visits in all, and pronounced herself cured. There is, however, no doubt but she will have a return of symptoms upon the slightest provocation.

This comprises all my experience. But these are facts, and facts are stubborn things to deal with. In regard to the best mineral water, I wish to say that, after trying the Lafayette, Ind., the Blue Lick, Ky., and the Ypsilanti, Mich., mineral waters, I am satisfied that the Ypsilanti mineral water is just what we want. It contains 20 cubic inches of gas to the gallon, and is so strongly impregnated with it that I use it over a second time by having solid rubber corks to replace the perforated ones when I have got through using the apparatus. Mr. St. Clair, President of the Company at 88 Randolph St., has kindly furnished a case of 12 quarts of the water, which I have forwarded to Dr. Bergeon, in hopes that it may compare favorably with the Eaux Bonnes water which he is using. I have also had an apparatus made by E. H. Sargent, which I think takes the place of Dr. Morel's very well, differing from it only in point of cheapness, costing but a little more than one-half the former.

The true place of this mode of treatment cannot be established until the experience of careful observers has been given us, years hence. I wish, therefore, to urge the profession to investigate the matter fairly, since time, I am confident, will prove that Dr. Bergeon has been one of the greatest benefactors of the age.

The President: This method of Bergeon has been extensively used in the Philadelphia Hospital, chiefly by Dr. Bruen, who has kindly furnished a resumé of his experience with it, which the Secretary will read.

"PHILADELPHIA, April 11, 1887.

"The experience thus far obtained in the Philadelphia Hospital in the use of Bergeon's treatment of consumption by rectal injections of carbonic acid gas impregnated with sulphuretted hydrogen, has been highly encouraging.

"In the *Medical News*, of April 2, 1887, a

statement of clinical results thus far secured in my wards was presented. These results indicated that the element of suppuration in pulmonary phthisis was usually very positively influenced. The night sweats have been controlled in twenty-five cases without an exception. The temperature has been modified even in the most advanced cases, and in some instances in which the disease has been extensive it has been brought to a normal point. A peculiarity of the temperature charts seems to be an introduction of a sub-normal temperature in the forenoon. The expectoration has been lessened in all instances, and in some has disappeared. A marked impression has been made for the better on the nervous symptoms which attend the disease, and a more cheerful and sanguine spirit has followed the therapeusis.

"It would seem justifiable to conclude that we have a most important therapeutic agent in the gas enemata treatment. One case of acute broncho-pneumonia treated on this plan has recovered, and will be discharged from the hospital. The history of her case has been already stated in the article in the *Medical News*. Another case of phthisis with pneumo-thorax under treatment for five weeks, is so much improved that the patient insists on her discharge. The râles have disappeared from this patient's chest (the pneumo-thorax was local and confined to the lower zone of the right thorax), the opening into the lung has apparently closed and retraction of the chest wall is going on. This patient had been ill for a year previous to admission to the Philadelphia Hospital; the pneumo-thorax was noted on admission. She has gained over nine pounds of flesh, expectoration has ceased, sweats abolished. The cough, however, continues as a modified symptom, since she is as yet merely a case of phthisis in stage of arrest, the bacilli of tuberculosis being still recognizable in the sputa.

"Two cases of commencing phthisis, with moist râles, dullness on percussion, harsh breathing, deficient expansion over right upper lobe, and tubercle bacilli in sputa, have recently been placed under the treatment. In these cases, the gain in one week has been most material. The râles have disappeared, and the patients express themselves as benefited. The method of treatment is surely worth a careful scientific investigation.

"In our hands a solution of 5 grs. sulphide of sodium and 5 grs. chloride of sodium in 22 ounces of water has proven the most satisfactory substance to produce the sulphuretted hydrogen. A solution more strongly impregnated with sulphuretted hydrogen has not only been more advantageous, but seemed injurious, apparently inducing pallor, loss of appetite, and in some cases irritation of the bowels. The gas should be introduced slowly; not less than half an hour seems requisite for each séance. From three to five quarts can be introduced in most cases, a gain in the tolerance of the necessary distension of the bowel being rapidly acquired. The absorption of the gas from the bowel is very rapid, and in half an hour the distension will entirely subside. It is sometimes introduced more rapidly, but the gain is in proportion to the time consumed in giving the gas. The carbonic acid can be pumped through the solution containing the sulphuretted hydrogen by the aid of a ball with valve attachment. * * * * *

"We have not obtained as yet satisfactory results from the examination of urine, or breath, nor of the effect of the treatment upon the bacillus tuberculosis.

"EDWARD T. BRUEN, M. D.

"1814 *S. Rittenhouse Sq*"

Dr. R. H. Babcock: My experience with this remedy is rather limited, but it seems to me there are several questions which should be considered in speaking on this subject: *First*, is the treatment safe? *Second*, is it applicable in all cases? *Third*, is it a cure? Practically the treatment is safe under the precautions which are laid down; but Dr. Osler in some remarks before the Philadelphia County Medical Society, narrates a case in which the patient almost succumbed after the first treatment, the gas being charged with a mixture of bisulphide of carbon and sulphuret of hydrogen. We can also conceive of cases in which, on account of limited respiratory power, the rapid administration of the gas by producing distension of the large bowel would seriously embarrass the limited respiratory capacity remaining in the patient. It is also conceivable that an undue amount of distension in cases of tubercular ulceration of the bowel might be dangerous, possibly producing rupture and peritonitis; and it seems to me this is a consideration which would render us cautious about administering this treatment in typhoid fever. I have had no experience and seen no reports of cases of this disease treated in this way. In regard to its applicability in all cases, that has been partially answered in considering the previous question. It has been the experience of Geneva physicians, as reported by M. Wiss, and of De La Roche, of Lyons, that there are cases which cannot tolerate the treatment at all. One

patient who had hæmorrhoids suffered from such colic that the treatment had to be abandoned. Wiss also mentions a case in which the treatment had to be abandoned in the course of a month, although superintended by Bergeon himself. I was asked to administer the treatment in a case in which the lungs were so extensively destroyed that it seemed to me unwise to administer it, though perhaps a small amount of gas might have ameliorated the symptoms; but had it been possible to abate or arrest the disease, the patient could certainly not have lived with such a small amount of lung left. Of course this consideration is one which renders the indiscriminate use of the treatment hazardous. There are cases in which the recovery, or arrest of the disease, has been so complete that the patients are practically well, and have been able to return to their avocations. However, if we are to estimate this thing by the disappearance of bacilli from the sputum we must say it is not a cure. No case is reported in which the bacilli have entirely disappeared. As you know, M. Cornil has instituted a number of experiments on animals with reference to this question, a solution of which we are all looking for with much interest. French physicians are experimenting with a great many other substances.

I am now using the treatment upon two cases, one is bronchitic asthma, but the treatments are too few as yet for me to make any report. I would not wish to say whether the relief that has been obtained is due to the treatment or is merely a coincidence. Another case is a lady aged 34, who has been suffering from phthisis for a year and a half, and who last fall received injections of phenic acid twice daily, without any improvement, who had been taking cabinet treatments from me for six weeks, without improvement, in whom the right lung is extensively consolidated, with a large cavity. In this case the relief for the first week was certainly very surprising. The patient gained in strength and experienced a feeling of well being, or as she expressed it a clearer feeling in her head, a feeling of brightness which she had not had for weeks. She certainly coughed less and expectorated less at a time. Her stools had been clay-colored in spite of everything I could do. At the end of a week they were of a natural color. The movement of the bowels was perfectly natural, her tongue also cleaned off in a remarkable manner at the end of five days. The treatments were continued at my office twice a day, and the patient had to come into the city, so the improvement was perhaps not quite as great as if she had taken the treatment at home. The second week she did not do quite as well, which I attributed to the quality of the mineral water. At the end of two weeks she was improved in respect to all the symptoms which have been related this evening. The night-sweats had ceased, her temperature was lower, but not normal—it ranged from 99° to 100⅘°. I took her temperature at 9, 11, 2, and late in the afternoon, and the highest she had with the exception of once was 100⅘°; it was repeatedly 98⅘°. Her tongue did not remain clean, and her appetite did not improve as I desired. She gained strength, but there was a complication, namely tubercular laryngitis. M. Bergeon states decidedly that tubercular laryngitis has been very greatly improved by this treatment. In the case just mentioned the laryngeal symptoms have improved, but whether entirely due to the treatment I am not prepared to say, as she has had various sprays and one topical treatment to the larynx. Her case is somewhat discouraging owing to the extent of the disease, since it is not entirely confined to the right lung. She has complained of no unpleasant symptoms since the first treatment when she complained of a slight burning at the anus and a desire to evacuate the rectum. Once or twice she complained of a little colic. She is now taking the treatments at home and feels very much encouraged, but the outlook to me is not what it should be. I saw her last Thursday, and I felt disappointed to learn that she is beginning to perspire again.

I think all the precautions have been taken in this case thus far, and it proves that the treatment does not give rapid improvement in all cases; and the fact cited by Wiss, that out of four cases treated in Geneva all died within three months, shows that it does not cure in all cases. However, it is a treatment which is so admirable and furnishes such good results in many cases, that I think all physicians are justified in trying it. Another thing which recommends it is that after the patient becomes accustomed to the treatment it can be handed over to a trusty member of the family to administer. Compared with pneumatic differentiation, it offers a much better chance for the improvement of the patient, although there are cases in which pneumatic differentiation will do what this will not. But thus far this method gives better prospects of benefiting a number of cases than any method which has been placed before the profession.

Dr. W. H. Weaver: A case under treatment at the Chicago Polyclinic, which is

making favorable progress, is one in which there is no doubt of the extent of the tuberculosis in the left upper lobe. The expectoration was quite profuse, and contained an abundance of bacilli. She has been failing for two years, but very rapidly for two months. She had fever, night sweats, prostration, wasting, loss of appetite, but had not taken any medicine of any sort. She came to the Polyclinic dispensary, where I treated her; the first time giving her an injection of only one pint of gas. Her temperature that day was 101½°; the next day she returned, and I gave her a quart injection, and her temperature was 102.6°; the next day, the third injection, her temperature was normal, and I gave her another quart. When she returned for the fourth injection her temperature was normal, and she seemed better in every way; said her appetite had returned, the cough was less severe, expectoration diminished greatly, and the night-sweats almost entirely relieved. At the fifth injection she had a slight rise in temperature; she said she had had no more chills and fever for the last three days. I used a solution of about 5 grains of sulphide of potassium with 5 grains of common salt in about 20 ounces of warm water, which gives about the proper amount of sulphuretted hydrogen gas, at least the patients all say that they feel better and have no unpleasant symptoms. I have given it in three other cases; one has some pelvic trouble, and the physician who is treating her thinks that it might be a counter-indication to the remedy, but she seems to be better in her general condition, has increased in flesh, and coughs less, and prefers to continue the treatment. Another case of incipient tuberculosis, where the upper left apex is affected more particularly, seems to be improved considerably under treatment. He has been having the treatment one week.

Dr. L. L. McArthur: In starting in with this treatment of phthisis I saw the difficulties that were going to arise in the apparatus, and think I can make some suggestions that will prove valuable. The apparatus presented to-night is not portable, and if the patients are to be treated at home they would either require a separate apparatus for each patient or else one must run the risk of breaking the apparatus. In the first place, I thought of a method of collecting the carbonic acid gas, by taking one of those portable laughing-gas cylinders, to be obtained at any dental depot, to a soda-water fountain and having it charged with carbonic acid gas. There can be stored from 1 to 500 gallons of gas, equally chemically pure with that recommended. This apparatus would simply require the turning of a stop-cock in the tube or opening to permit the gas to escape at any rate desired. If found desirable to continue the use of sulphuretted water, instead of mixing the two gases together first, it could be done by using a wash-bottle and a delivery tube. I believe an equally efficient method is to introduce into this cylinder a solution of sulphide of potassium, which furnishes for every ounce of the sulphide of potassium about a gallon of sulphuretted hydrogen. The carbonic acid formed liberates the H_2S from the sulphide introduced. The strength, according to Bergeon's method, is about half of 1 per cent., or a little less. By a little calculation it will be seen that the carbonic acid formed by the combination of the carbon dioxide and water would set free the hydrogen in combination with the sulphur in the definitely desired quantities, so that it would not be necessary to use the sulphuretted water. In that way the gas could be introduced into the measuring bag and then into the rectum. The cylinder would hold a sufficient amount of gas for many treatments, and as it is easily portable, it could be taken to the houses of patients, and not require them to come to the office.

Dr. R. Tilley: I have had no experience whatever in this method of treatment, but I would like to say a word with reference to the apparatus which I think would certainly make the measurement of the gases used more definite. I think, notwithstanding the doctor's explanation of the number of pressures that may be necessary to constitute a quart, that one individual may require so many pressures and another so many less or so many more, and thus the amount would be somewhat indefinite; whereas if a bottle of the necessary size was filled full of carbonic acid gas, and then another bottle with a tube attached full of water, the latter could be attached with the necessary tubes and elevated just the same as a siphon, and the water introduced into the bottle containing the carbonic acid gas and passed through the sulphuretted hydrogen water with the required rapidity, and thus it would come much more regularly than could be done by means of this spasmodic pressure of the bulb. I would like to call attention to the fact that there are on sale in this city large cylinders containing absolutely pure carbonic acid gas, imported under the auspices of the Prussian government. The gas is condensed to the liquid state at the place where it flows from

the earth at a great depth, from the natural channels. I do not know exactly where it is for sale, but at some manufactory of soda apparatus; and from communication with some of the druggists here I learn that it is only a little dearer than that which they manufacture themselves. It might be argued, however, that if it was simply a little dearer for the druggists it would not be any dearer for those who make it a practice to administer the treatment in their offices, and it would be a convenient way to obtain the gas with the absolute certainty of its being perfectly pure and always on hand.

I would like to say a word about the marked indistinctness that has characterized some few of the reports. It was a positive relief to me when Dr. Babcock gave his more moderate report. The way in which bisulphide of carbon and sulphuretted hydrogen were confused and interchanged was perplexing. Both these agents are exceedingly poisonous, and it is well to bear it in mind. I had some experience with the sulphuretted hydrogen some years ago in the laboratory, and it was my experience that the inhalation of a small quantity was attended almost regularly with a crop of boils. In any case, I think it would be better to have a more definite idea of the quantities of these poisonous agents than can be obtained by the information given us to-night.

Dr. Walter M. Fitch: For generating the gas we use a common Wolf bottle with three corks, one for a stop-cock for the acid, one for the delivery tube, and one for the safety-valve. This last must not be pressed in too tightly; at one time I had the stop-cock blown out and broken by putting in the acid a little too rapidly. To make the gas we use about a heaping tablespoon of bicarbonate of sodium, covering that with cold water about two inches deep. If we use hot water we make a suds that will foam up and run into the bag. We use the bicarbonate of sodium and sulphuric acid diluted one part in four. The reason for using the sulphuric acid in preference to any other is that, being absolutely non-volatile, none of it will pass over into the bag of carbonic acid gas. To make the gas, the generating-bottle is connected with the bag, which is emptied and tightly rolled, in order to remove all the air. The generator should also be emptied of air by turning in some of the acid before it is connected with the gas-bag. The bags usually hold about one-half of what they are marked—a three-gallon bag will hold about six quarts, etc. If we should over-distend it, the corks would be blown out of the generator. For injecting the gas, the stop-cock is turned off and the bag is connected with the bubbling-tube, which extends to the bottom of the bottle of mineral water, so that the gas coming from the bag may pass down into the water, and, rising up through it, be medicated by the sulphur vapor which it contains. It is injected by means of a hand-bulb. In using the bulb it is important to remember that, since it is intended to be used only with water, the action of the valves is not perfect with gas, and it is therefore necessary that the bulb be held vertically, so that the weight of the valves may assist in closing them. In using it in this way we secure a perfect action which draws the gas into the bottom of the bottle and delivers it through the tube. I have now connected it as in use. The bisulphide of carbon has been mentioned several times. In order to use this it is necessary that the gas be washed, for fear that it may contain impurities; for none of the chemicals we get are perfectly pure, and as they are most likely to contain vapors of hydrochloric acid which are easily dissolved in water, the gas is bubbled through pure water to purify it. Between the Wolf bottle and bulb is inserted an ordinary chemical drying tube, a glass tube three-fourths of an inch in diameter, which is drawn down at one end small enough to have the rubber tube slipped over it. Into the other end is fitted a cork with a glass tube through it; in the drying tube is placed a tampon of cotton, and the requisite amount, usually one drachm, of bisulphide of carbon is placed on the cotton. In passing the gas through this cotton it becomes very strongly impregnated with the vapor and is injected in that manner. I think some Philadelphia physician spoke of an instrument for measuring the gas injected. A very simple way of measuring it when using a small apparatus of this kind, is with the bulb. The bulb will deliver at each compression just so much gas; in order to measure how much is delivered we simply take a measured bottle, invert it over the water with the water filling it, then introduce the rectal tube into the bottle and remove the water from it by displacement, the number of compressions being counted. The bulbs vary in size. I remember the capacity of six now in use: two count 15 compressions to the pint; three count 20 compressions to the pint, and one counts 25. Thus, with each apparatus the bulb must be measured, and knowing its capacity, the gas can be prescribed in as definite a way as any medicine measured out of a bottle.

The President: My experience with this method, extending over less than a month, comprises the observation of one case that impressed me strongly; this was a young man suffering from the last stages of quick consumption, who had been in the care of Dr. H. A. Johnson. He was very feeble, much emaciated, had badly swollen feet and albuminous urine. His temperature ranged from 101 to 103 each afternoon, and he had profuse night-sweats. In addition to these usual symptoms he suffered to an extraordinary degree from laryngeal tuberculosis. He had been unable for many weeks to lie down with comfort, and according to his own statement, had not slept fifteen minutes in three months. Cough was constant and expectoration profuse. About a month before Dr. Johnson had given him three or four weeks to live. I used gaseous enemata, employing the artificial solution advised by Dr. Bruen, twice a day. Improvement began on the second day, and by the fourth day was pronounced. The cough was less distressing and the sweats and expectoration had diminished, the patient was able to lie down and sleep for two hours continuously. He was, however, so evidently near dissolution that I deemed it inadvisable to continue a tentative treatment, and stopped it on the fourth day. Two days later he sent an urgent request for the resumption of the treatment, saying that his former symptoms were returning. However, I declined to use the injections further, and six days after their discontinuance the patient died, nearly two weeks after his physician had expected his demise.

It should be remembered that these injections seem to arrest, not the tuberculosis proper, but the sepsis, which is secondary thereto, and that there are numerous other septic conditions in which benefit may fairly be expected, such as surgical sepsis, diphtheria, puerperal fever, etc. The apparatus furnished by the stores is unnecessarily expensive and inconvenient for a visiting practice. I use an improvised apparatus, consisting of a gas bag, double perforated cork, and an ordinary large wide-mouthed bottle—the whole costing $2.50 instead of $10. The entire outfit can be readily improvised at a little cost and carried in a small handbag.

My limited experience gives me the impression that the artificial solution of the sulphide of potassium is preferable to either the Ypsilanti or the Blue Lick water, because the amount of sulphuretted hydrogen in these waters as we obtain them at the drug store, appears to be extremely variable, while in the artificial solution it can be maintained at a given percentage, or increased or diminished as desired, yet care should be taken to make a weak solution about such as is recommended by Dr. Bruen, since a too concentrated solution of the poison may produce very unpleasant symptoms. This method can be employed by every practitioner as well as by the most expert specialist. If it will accomplish nothing more than the relief of the distressing cough, expectoration, fever and sweats of advanced consumption, it will at least do what can be effected by no other therapeutic measure with which I am acquainted; hence it is to be hoped that it will be submitted to a general test by the profession, that we may quickly ascertain exactly its merits and demerits.

Dr. C. M. Fitch: The remedies that have been offered for consumption in the past are about as numerous as the sure cures that have been offered for cancer and hydrophobia, and have commanded about as much attention from the profession. But this method of Bergeon's comes to us under very different auspices; it comes with a letter of introduction that demands from us respectful attention. J. Henry Bennett endorses Bergeon as a man worthy of credit; and if Bergeon's statements be true, they are of the deepest interest to us all. It is in Bergeon's favor also that he not only asks us to believe something, but he gives us a reason for so believing—a plausible explanation of what he wishes us to receive. He assumes that septicæmia, arising either from the absorption of pus, or the morbid product of the bacilli, is the cause of the formidable symptoms of phthisis, and that if we can antagonize this septicæmia, can undo day by day the deadly work of the bacilli, we shall gain time in which the lesions that have arisen from phthisis may be overcome.

The first case in which I had occasion to test this method of Bergeon, was one of extreme anxiety to me. The patient, a young lady 20 years of age, had previously had exceptionally good health, was well nourished, with a muscular development that seemed to defy fatigue. She returned in July last from a visit to Colorado with a cough which was referred to the dryness of the climate and the inhalation of the alkaline dust, which causes a catarrhal irritation. This seemed a plausible explanation, and as the cough was not urgent, it received but little attention until, in November, she took a cold which resulted in chills for three or four successive days, and seemed to prostrate her greatly. I then examined her chest and, to my aston-

ishment, found extensive and marked consolidation at the apex of the left lung; there was also irritation throughout the remainder of the lung and some moist râles. I was much alarmed by what I found, for the location of the consolidation made me fear it might prove something more than simple pneumonia. Several of our best physicians tendered their aid, but the case failed to improve. The patient lost flesh rapidly, her cough became fearfully oppressive, and her temperature never fell to normal, rarely below 100°, and most of the time 101° and rising to 103°. She had daily chills and profuse night-sweats, and the case presented all the features of acute phthisis. At the last examination, made by Dr. Belfield and Dr. Ochsner, both thought they detected bacilli in the sputum, although previous examinations had failed to show them.

Late in January my attention was called to an article in the *Medical Record*, giving a notice of Bennett's paper in the *British Medical Journal*, which contained an account of Bergeon's method. After considerable trouble I obtained a copy of the paper which contained this article, and went to Sargent's to have an apparatus made, and there learned that they had just made one for Dr. Crane, who kindly allowed me to appropriate it, and ordered another for himself. Knowing nothing at that time of what we might expect in such a case from our different mineral waters, and knowing that Dr. Bergeon recommended bisulphide of carbon as the best substitute, we commenced treatment with the bisulphide, and the effect was surprising. The treatment was commenced seven weeks ago to-day; during the week previous, the temperature had at no time fallen to normal; the lowest point was 100°, and once it rose to 105½°, and night-sweats and chills were constant. The first time the injection was tried very cautiously, only a moderate amount of gas being used. The effect was not specially apparent; the second day the temperature still rose to 103°. That night the gas was used much more freely and with results that to us were somewhat alarming. The next morning the temperature fell to 95°, and it did not rise above 100° during the day; the cough was almost suppressed, although it had previously been very distressing. The next day we did not use the gas quite so freely, but the day following the lung was almost entirely occluded; the mucus seemed to become viscid, and the air was almost shut out from the lung. There was so little elimination of the bisulphide through the lung that we soon began to have marked symptoms of bisulphide poisoning, although in many respects she appeared better; the cough was almost gone, and there were no chills. The treatment was discontinued for about ten days, and then resumed with the Ypsilanti mineral water. From that time there has been a satisfactory improvement, and she is better than she has been at any time since her sickness began; her appetite and strength are improved, and she is evidently beginning to gain flesh; her cough is greatly lessened, and the chills have altogether disappeared. Her night sweats have been absent for six weeks, although during the last warm weather she perspired a little for three or four nights there was nothing in the nature of colliquative sweating, and she seems now in a fair way to recover.

The second case in which I tried this remedy seemed about as hopeless as well could be; the patient was confined to her bed, had been suffering from severe hæmorrhage, chills, night-sweats, and great prostration. There was marked dullness at the apex of the right lung, and the physician who was treating her recognized softening. The husband, whose family were patients of mine, after the physician told him that nothing more could be done, came to me. I told him that I did not know that I could do anything more; the only thing I could suggest would be this new treatment which I had been experimenting with, and which might be of some value. He was anxious to have something tried, and the case was undertaken. At the end of four days this patient's chills, which had existed then about a month, ceased entirely, and have not since recurred. On the ninth or tenth day the sweats disappeared; her cough was relieved from the first, no opiate could have controlled it more completely. The expectoration was also lessened, her appetite has improved, and she is gaining in strength. In all respects I think she has gained as much in the time she has been under treatment as I ever saw a patient gain under any treatment in the same time.

Another case was a young man of scrofulous habit, who has a stiff knee from scrofulous disease of the joint. He has been under treatment about three weeks. There was marked consolidation in his case also, at the apex of the right lung, and every indication of phthisis. He has improved materially; his cough is much lessened and he is gaining in strength. The indigestion and flatulence, which had previously troubled him very much, has disappeared under the use of gas;

there has also been great improvement in his appetite.

A fourth case was a young woman of twenty, who came under treatment some two or three weeks ago.

The case was chronic, was not urgent in character; at the same time I thought there was little doubt of its being a true case of phthisis. She gained rapidly from the first, and at the end of ten days her menses, which had been absent since December, returned, and her cough was so nearly cured that she considered herself well, and without consulting her physician discontinued the treatment.

Another case, that of a laboring man, large and muscular, who has been working where there is a great deal of dust, probably from mechanical irritation had contracted trouble with his lungs. He had repeated hæmorrhages, which caused great loss of strength; there was marked though limited dulness at the apex of the right lung, but the chief feature of the case was the marked loss of strength, altogether too great to be accounted for by the lesion in the lung. There seemed to be some torpidity of the liver, and a little pro-iodide of mercury was given. His strength, either from the gas or stirring up the liver, has very greatly improved.

The other cases I have seen have not been under treatment long enough to justify me in making a report. It seems to me from what I have seen that we have a remedy that is worthy further trial. Whether, or not, it will fulfil the promise of its youth we have yet to see. I have no doubt this remedy will relieve spasmodic asthma, and there are other conditions that it would relieve. In puerperal fever I should try it, using the bisulphide of carbon, but using it cautiously. I also think it would be of value in malignant diphtheria and typhoid fever.

Foreign Correspondence.

LETTER FROM MUNICH.

THE PATHOLOGY AND THERAPY OF WHOOPING COUGH.

BY PROF. A. VOGEL, OF MUNICH, AND PROF. HAGENBACH, OF BASLE.

In a paper read before the Congress of Physicians, held at Wiesbaden, April 14th, 1887, Professor Vogel said that whooping cough is classified by Gerhardt among the infectious diseases; yet the contagion of whooping cough is of a different nature from that of the acute exanthemata. It has not yet been discovered; and the declarations of Hallier and Letzriech could not stand before the judgment seat of the exact bacteriologist. The short bacilli found in the sputum of those afflicted with whooping cough, by Burger, do not influence Flügge. You must inform yourselves in regard to these long or short characteristic micro-organisms. As concerns the symptomatology, the great clinicians of the last century presented a gastro-pathological theory. In the beginning of the present century the neuro-pathological theory had many followers, but this also fell to the ground, as unsuccessful as was the attempt to prove whooping cough to be a simple bronchial catarrh. There now remains no doubt that it comes under the list of infectious diseases. The essayist here recalled the decision of Linne that the cause of whooping cough was the inhalation of a contagium animatum, and related the latest revelations of the laryngoscope in the hands of Herff, of Darmstadt, and likened it to the ideas of Beau, Rehn, Meyer, Hüni, and Rossbach. The first found the whole throat hyperæmic, the others found only the posterior walls to be constantly diseased. The essayist proceeded in relation to the pathological anatomy, saying that in pneumonia following measles and whooping cough great numbers of microbes were seen by Thaon in the pus and lung cells of the expectorate, and indeed in whooping-cough pneumonia he had found diplococci and bacilli in greater numbers than in diphtheritic pneumonia. Marshall describes two cases where whooping cough was complicated with aphasia, stupor, convulsions, and hemiplegia. C. Wagner reports a case of sub-cutaneous hemorrhage in a five year old boy with whooping cough. In some instances it is a cause of deafness. In the case of a nursing child it is a dangerous and pernicious disease to contemplate; in older children the course of whooping cough is favorable throughout. In an epidemic in Würzburg, 52 children under one year were taken ill, and 13, or 25 per cent., died; 248 were attacked between one and five, and 12, or 4.8 per cent., died; between six and fifteen years 87, of whom 1, or 1.1 per cent., succumbed. Prof. Vogel lamented that the mortality tables followed the age so closely, notwithstanding the therapeutics. The remedies recommended for whooping cough are of two great classes—antispasmodics and disinfectants. In treating the spasmodic cough by narcotics one resigns every chance of shortening the process. Opium and all its prepa-

rations should not be given continuously for any length of time; although a small dose of opium or morphia is a great relief to children who have passed sleepless nights. A combination of cannabis indica and belladona is especially recommended by Vettersen, of Hamar. Of 116 children 83 showed a favorable result, of these 30 were completely cured in from 8 to 14 days. Prior and R. Polt recommended the painting of the oral cavity with a solution of cocaine from 10 to 20 per cent.; the application of cocaine is not entirely without danger, however. The antiseptic treatment strives to shorten the attack by destroying the germs of the disease. A residence in gas factories where the products of the distillation of coal act favorably on the mucous membrane of the respiratory apparatus is first to be recommended. This mode of treatment is sometimes inconvenient, some gases can be generated in the sick-room by the use of benzine and carbolic acid. After frequent experience the author did not depend much on this treatment. The inhalations recommended by Fick, of Coblentz, in which 15 to 30 drops of pure carbolic acid are placed in a cotton ball and inhaled, will be endured but a short time by any child. For general disinfection of the sleeping-room of the patient, Sohn burns about 300 grains of ordinary sulphur to each cubic yard of space. Further investigation in this line is to be recommended. Michael, of Hamburg, blows into the nasal cavities through a glass tube 20 centimeters long some powdered resin of benzoin, and besides this uses sulphate of quinine or nitrate of silver in a 10 per cent. mixture with lard. The reports from this treatment in the hands of other physicians are favorable. Concerning psychical treatment nothing new has appeared in recent literature. No followers have been found for the opinion that whooping cough can only be cured by the rod, fortunately for the poor little patients.

Professor Hagenbach gave a large number of statistics on this subject. 240,000 children have the whooping-cough every year in Germany. In Basle, 1,000 per year, with 12 deaths; in Geneva 11 deaths; in London 80; the rest of England, 22. The mortality is on the average four or five per cent. Noblitz reports the mortality from this disease among the children of his policlinic in Breslau, in the years 1875 to 1885, as seven, or nine per cent. In Basle, during the last eleven years the mortality among children under one year has been 26.6 per cent.; from one to two years, 13.8 per cent.; two to five years, 3 per cent.; five to ten years, 1.8 per cent.; ten to fifteen years, 1.6 per cent. These figures show that whooping-cough is a serious disease in the tender years of childhood. With the greatest mortality we have the most complications.

But what, he asked, is whooping cough? Recent investigations indicate that it is an infectious disease. It comes epidemically; seldom sporadically. In large cities it is endemic and contagious. In whooping cough we have a catarrh of a certain part of the mucous membrane of the respiratory tract, which is connected with the immigration of fungi. At those places, through irritation of filaments of the superior laryngeal nerve, the attacks of coughing are brought on by reflex action.

In discussing the question whether or not we have to deal with a local or blood infection, Professor Hagenbach related the different positions held by Letzreich, Colston, Guerneau, De Mussy, Herff, Rossbach, Heyer, Hüni, Lori of Pesth, Rehn, and Baginsky.

The following may be said with positiveness concerning the nature of the contagion, and the liability of the human race to this special poison in general. The disease is most frequent in the first year of life, and is found with rarity in the first months. The susceptibility is great up to the tenth year; after this age it becomes less. It is contagious in the first and second stages. So long as mucus is produced, the disease may be carried. Outside of the human body the contagium seems to be unable to exist for any length of time. The reader then discussed the prophylaxis. Schools for small children should be carefully watched, and children with suspicious coughs kept away as long as they cough in paroxysms. The expectorated material must be carefully removed. If the disease spreads, the school should be closed. The changing of air and place for children affected with whooping cough is often the cause of an epidemic in places free from the disease. Prof. Hagenbach then proceeded to treat of the therapeutics, much of which he found defective.

Dr. Michael, of Hamburg, discussed the subject, and recommended a method used by him, in which he blew powder into the child's throat; and gave statistics of his success. In more than 100 cases so treated he had more or less improved 75; in 25 cases no success at all. In fresh cases his method proved satisfactory, and also in those which had lasted six weeks. The speaker laid more stress upon the qualitative improvement of the cases than the duration of the disease, and circu-

lated through the congress charts giving the course of the disease under the use of different remedies.

Prof. Heubner, of Leipsic, considered the character of the disease to be that of a virulent catarrh, and not a blood infection. He also exhibited charts showing the number of attacks of coughing per day. Like the former speaker, he thought it possible to render these attacks fewer and lighter, and eventually to cause the shortening of the disease and its cure.

Dr. Schliep, of Baden-Baden, recommended the treatment by the pneumatic cabinet, which he had used. The increased pressure of air in this cabinet acted mechanically as a sedative on the mucous membrane, and increased the inhalations of carbonic acid gas. He found 12 to 20 sittings sufficient to cure a child suffering from whooping cough. As a further remedy, he recommended an emulsion of four grammes of turpentine. He also had good success from fumigating the room well with sulphur.

Dr. Sonnenberger, of Worms, advised the use of antipyrin. He had used it in an epidemic in Worms and vicinity with success; it immediately rendered the attacks milder and shortened their duration.

Dr. Cohen, sanitary officer for Hanover, spoke of the favorable results from inhalations of bromide of potassium, also of the musk preparations.

Editorial Department.

Periscope.

The Prostate Muscle.

Mr. Reginald Harrison, of Liverpool, has an idea of the prostate which certainly is not in accord with the usually accepted one. By the term "prostate muscle," he means the prostate itself, and apparently considers its glandular function as secondary to its work as a sphincter. He believes that, during life, the prostate never presents its post-mortem appearance of a hard body, of about the shape and size of a chestnut, excepting for a few moments when the bladder is completely empty. At other times, he holds that it is spread out like a funnel, supporting the bladder; the degree of expansion of the prostate varying, of course, with the distention of the bladder. Mr. Harrison goes on to say: "Hence the action of the prostate may be said to be just as continuous as that of the heart." Mr. Harrison invokes, in support of his views, the results of rectal examination when the bladder contains a certain amount of urine. If the shape of the prostate were what it is commonly supposed to be, one would find the greatest hardness and prominence in the median line; but Mr. Harrison points out that the centre of the prostatic area is softer and more yielding to the touch than the sides, where there is a marked ridge presenting more or less tonicity.

Sandalwood Oil in Renal Colic.

Dr. Philbert, himself a sufferer from renal colic at frequent intervals, gives in the *Journal de Médecine de Paris* an account of the effects of sandalwood oil in the last two paroxysms with which he suffered. Having read an article by Dr. Gipoulou, in the same journal, recommending the drug in such cases, as soon as he felt the approach of an attack he took four capsules of 5 minims each. He then went into a hot bath. The attacks had hitherto lasted several hours, but in this instance it was over in less than an hour, and the suffering was not nearly so great as usual. An interval of six months elapsed ere he was again reminded of his trouble by the well-known prodromata. A repetition of the former medication resulted in the complete abortion of the paroxysm, a transient pain in the ureter comprising the entire attack.

Common Salt in Migraine.

Dr. Rabow, of Berlin, finds that half a teaspoonful or more of common salt, taken as soon as the premonitory symptoms of an attack of migraine begin to show themselves, will frequently cut it short in about half an hour; similar treatment has also proved of service in epilepsy, as was remarked some years ago by Nothnagel; the explanation being probably in both cases that a violent reflex action is set up.

—In the *Canada Med. and Surg. Journal* of May, 1887, Prof. Osler reports a medical student as answering the question, "How to treat hæmoptysis?" by the reply: "Plug the cavity with cotton saturated with solution of Monsell's Solutions, dry!"

THE
Medical and Surgical Reporter.
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N. A. RANDOLPH, M. D.,
CHARLES W. DULLES, M. D., } EDITORS.

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LAPAROTOMY FOR EXTRA-UTERINE PREGNANCY.

The operation of removing the product of an extra-uterine fœtation by an incision through the abdominal wall was first performed in 1594, and since that time, now nearly three hundred years, it has been employed a large number of times for the purpose, practically, of removing an intra-abdominal tumor. This operation is now known as a "secondary operation" when it is undertaken solely to remove the product of conception, after the fœtus is dead. What is known as the "primary operation" is the attempt to remove an extra-uterine or ectopic fœtus while it is living and viable, and during the life of the mother.

Dr. Harris, of Philadelphia, who is an indefatigable investigator in regard to such matters, in a paper in the *Medical News*, May 21, 1887, states that the true primary operation of laparotomy for extra-uterine fœtation has been performed only twenty-five times in seventy-four years, the first operation having been done in 1813, in Berlin.

Thus far the mortality by the primary operation has been at least ninety-two per cent., and it will probably prove higher than this when the operations performed in 1883, 1884, and 1885, are all reported.

These results are in marked contrast to those of the secondary operation, which, when performed not earlier than three months after death of the fœtus, has recently been one of comparative safety. The difference between the mortality of primary and secondary laparotomy for extra-uterine pregnancy is almost entirely due to the difference in the risk of hemorrhage, combined with that of septic infection, which is very great in the former and comparatively slight in the latter. The location of the placenta has much to do in determining the final result. This accounts for the fact that sometimes patients recover who have been operated on only a month after the death of the fœtus, while others have died of hemorrhage when the operation has been postponed four months. The immunity under the secondary operation is also partly due to the changes which take place in the placental circulation after its functional activity ceases.

One of the most interesting features of Dr. Harris's paper is his account of the locations of the placenta in extra-uterine pregnancy. In about one case out of six or seven, he says, the placenta will be found implanted upon the abdominal wall. It may be found in Douglas's cul-de-sac, as was the case in two operations performed by Hildebrandt. It may cap over the superior strait of the pelvis, as in the case of a patient who recovered after an operation by Mr. Jessop, of Leeds. It may be located over the iliac fossa; be attached to the uterus and its appendages; be implanted over the lumbar vertebræ, or kidneys; be attached to the small intestine, stomach, or liver; and it has even been found within the uterine cavity. In all of these locations except the last, there can be no contraction of the seat of attachment of the placenta after the fœtus has been removed, and the process of exfoliation must produce more or less hemorhage. To remove a placenta from its attachment to the viscera during the operation must be necessarily fatal, and it has not been attempted in this class of cases, so far as Dr. Harris knows, for forty years.

Dr. Harris concludes his paper by suggesting that, if the risks of primary laparotomy for extra-uterine pregnancy are to be lessened, it will be by adopting the method employed by Dr. August Martin, of Berlin, in 1881, who ligated the vessels of the placenta and removed it with the cyst; and by antiseptic treatment of the placenta, to prevent its decomposition and separation. If the placenta is implanted over the iliac fossa the cord may be tied and cut off close to the placenta, the cyst cavity washed out with corrosive sublimate water, the cyst opening inverted so as to bring the serous surfaces in contact, and the latter united with sutures, and the abdominal wound closed without drainage.

HYSTERICS AND SAINTS.

Charcot has recently been taking instantaneous photographs of some of his hysterical and cataleptic patients during their attacks, and has observed a resemblance between the attitudes they assumed and the expressions of face they exhibited, and those seen in the pictures of the saints, which are so common in the churches and galleries of Europe. The announcement of this discovery has caused some alarm to certain pious Frenchmen, who have denounced it as dangerous to morality. On the other hand, certain critics, who have no great concern for the reputation of the saints, have welcomed Charcot's discovery as though it put an end to the claims of the saints to sanctity, and showed that the saints were as great humbugs as are the subjects of Charcot's experiments.

In this we believe that the pious friends and the unsympathetic critics of the saints and martyrs are getting the relation of things a little confused. There can be no reasonable doubt that Charcot's experiments on hysteria have produced a type of hysterical manifestations in Paris, which occurs there with very great frequency, and occurs elsewhere very rarely—perhaps never. This type has certain varieties, one of which has been well distinguished as that of religious frenzy. The attitudes assumed by patients in such attacks are most palpable imitations of what they have seen, or imagined, in the Roman Catholic churches of France. For this reason it is by no means strange that hysterical patients should present the attitudes of saints or martyrs in the paintings of the old masters. These paintings, or copies of them, bear a most important part in the unconscious education of the French, and especially of the French women, who furnish by far the greater number of Charcot's patients. And it is much more reasonable to assume that Charcot's subjects are wilful or involuntary imitators of the representations of saints and martyrs than to assume that the saints and martyrs were hysterics. No one need take trouble to defend St. Thomas or St. Stephen, or any other saint, from the charge of having an attack of hysterics when "inspired or possessed." For no painter ever saw a saint in this condition, and it would be no reflection upon the saint if it could be proved that the painter's model, posing as a saint or martyr, had worked himself or herself into the very condition which Charcot's subjects get into when they pose before the apostle of hysterics.

We have therefore no sympathy with the fears of those pious souls who have denounced Charcot's experiments as tending to establish heresy in religion, nor with the gratification of those critics who would be glad if they had this tendency. The similarities Charcot has pointed out have no bearing upon religion whatever, although they have a real bearing upon certain scientific questions of great interest and importance; and their bearing upon scientific matters will be better understood and better appreciated if it is not confused by being mixed up with a matter with which they have nothing at all to do.

THE ACTION OF IODOFORM ON THE BACILLUS OF TUBERCULOSIS AND OF ANTHRAX.

In the Sixteenth Congress of German Surgeons, Prof. Bruns discusses the above question, and gives the results of his treatment by iodoform injections (10 % mixture of glycerin and alcohol) of 54 cases of tubercular abscess. Previous to the injection, the pus was extracted by aspiration. Two or three injections were usually required, though often a single one sufficed. Forty out of fifty-four cases were cured, though many of the cavities were large enough to contain over a pint. In view of the extreme difficulty of healing these abscesses, the results were considered highly satisfactory. The beneficial effect was ascribed to the fact of the intimate contact of the iodoform with the tubercular tissue, destroying it, and producing normal granulation. To prove this action of iodoform on the tubercle-bacillus, several abscesses of demonstrated tubercular origin were opened after injection, and preparations of the walls made for histological study: the

results showed a progressive disappearance of the bacilli in the walls, an increase of granulation, a change of granulation into connective tissue, the absorption and disappearance of exudation. The anti-tubercular action of iodoform was thought to be established.

Prof. Sänger followed Prof. Bruns, and described the results of his experiments with iodoform upon the bacilli of anthrax. Their growth was found to be checked by iodoform, and their reproductive power lessened. There seemed to be an anatomical change of the bacillus, of the nature of a protoplasmic degeneration. The inoculation of mice with iodoform anthrax cultures of one to three days' duration resulted in death in one day. With older cultures death was delayed, until, if cultures older than six days were used, the animals escaped altogether. The power of iodoform to affect the bacillus locally was proved by planting the bacillus in a "pocket" both before and after the same had been filled for sometime with iodoform. The result was in harmony with the experiments above mentioned.

THE PROPER FIELD FOR ATHLETICS.

In the June number of *Lippincott's Magazine* there is a very able and interesting paper by Prof. J. William White, M. D., upon the subject of Exercise and Athletics. In this paper Dr. White does not defend the excesses to which college athletic sports sometimes lead, or approve of indiscriminate attempts to secure big muscles. But he does show, by citing examples from ancient as well as from modern times, that the judicious cultivation of a fine physical development may be expected to produce improvement in the type of the individual, and of the race.

We welcome this contribution to the literature of the subject as being timely and pertinent. The day is gone by when dyspepsia should be considered a necessary accompaniment of a high mental development. The coming man should not have a strong mind struggling against the restriction of a puny body; but the true *mens sana in corpore sano;* the health to enjoy life and light and air, and the strength to share in every work or sport proper to his time of life. To this desirable end nothing can contribute more than a rational understanding of the way to make athletic exercise—especially in youth—contribute to the symmetrical development and maintenance of the body.

The paper referred to is a valuable contribution, and we hope shortly to present our readers with an abstract of its contents.

A NEW APPLICATION OF THE THERMO-CAUTERY.

Prof. Genzmer of Halle (before the XVI. Congress of German Surgeons) advocated the use of the cautery in tuberculous lymphatic glands and tumors which are not amenable to treatment by the knife. Under treatment by the cautery they disappeared. In the case of small lymphatic glands it was only necessary to insert the point of a needle-like cautery into the gland, whilst in larger ones a knife-like instrument was passed through the tumor in all directions. He repeatedly found that the glands or tumors became smaller in a few weeks or disappeared entirely. Since making this happy discovery he has treated many of these tumors in this manner, and is entirely satisfied with the results.

He has also treated in the same manner five cases of tuberculosis of the testicle. The patients would not submit to castration. Of the five, two were entirely relieved by complete disappearance of the swelling, and in the three remaining cases the swelling was reduced. Two cases of goitre were likewise treated by this method. The patient was threatened with asphyxia, so that an operation was indicated. The operation with the cautery was performed three times, and consisted in an incision with the cautery knife three centimetres deep, leaving the blade several seconds in the wound. The result was satisfactory.

FLORIDA MEDICAL AND SURGICAL JOURNAL.

The good will of the *Florida Medical and Surgical Journal* has been transferred to the *New Orleans Medical and Surgical Journal,* Dr. T. O. Summers, of Jacksonville, Florida, becoming an active collaborator of the latter periodical. This combination is a move in the right direction. One of the greatest difficulties in the way of successful medical journalism nowadays depends upon the fact that new journals are often started when there is neither need nor proper support for them. It would be much better if the vigor which is often wasted in a vain attempt to start a new medical periodical were used so as to contribute to the success of those which have already won the confidence and support of the profession.

—Dr. Rush S. Huidekoper, head of the veterinary department of the University of Pennsylvania, has recently performed the operation of enucleation of an injured eye upon a dog, and successfully adapted an artificial eye to the socket.

Notes and Comments.

Home Treatment of Mental Disease.

In the course of an interesting paper in the St. Louis *Courier of Medicine* for May, 1887, Dr. Edward C. Mann says:

In puerperal insanity I have seen good results in home treatment, commencing with a full purgative dose of hyd. chlor. mit., followed by salines and then gin, ether and opium, as I have mentioned, at night to produce sleep. In delicate neurasthenic women with uterine complications, a good nurse, perfect rest, one drachm of Warburg's tincture daily before breakfast, the fluid ext. of coca when indicated; quiet nervousness by either the compound bromide mixture, the formula for which is given below, or by the following:

℞.	Zinc. valerianat.,	ʒj.
	Ext. belladonnæ,	gr. jss.
M.	Div. in pill No. 30.	
Sig.—One pill every two hours.		

This simple treatment, with massage, milk diet and electricity, will save many cases of neurasthenia and hysteria from an insane asylum. I treat many such every year, admitting them as patients into my own family, and witness rapid cures. There is another form of mental excitement which occurs in women at the climacteric period, and which often runs into insanity that consigns them to asylums for years. I have checked this peculiar form of mania, which is characterized by suspicion, sleeplessness and refusal of food, with hot vaginal douches, given by a trained nurse daily, and the following pill, given every hour, or two hours, as the necessities of the case demand:

℞.	Pulv. camph.,	grs. vj.
	Ext. hyoscyam.,	grs. xiv.
	Pulv. digitalis,	grs. iv.
	Mucil. acaciæ,	q. s.
M.	Ft. pill No. 6.	

This pill can be followed by the compound bromide mixture, the formula for which is here given, until the patient is well:

℞.	Sodii bromidi,		
	Ammonii bromidi,	āā	ʒss.
	Pot. bromidi,		ʒj.
	Syr. hypophosphitis comp.,		f. ʒiij.
	Syr. tolut.,		f. ʒj.
	Aquæ menth. pip.,		f. ʒ jss.
	Liq. pot. arsenit.,		f. ʒ j.
M.	Dose, two teaspoonfuls thrice daily in water.		

Port wine at dinner, plenty of malt and hypophosphites, together with that admirable nerve tonic, Warburg's tincture, in one-drachm doses before breakfast. Advancing age brings with it, perhaps, depressing cares and irritating environments, or the brain has been overworked and overwearied, so that very few women reach the menopause with a vigorous and well-poised nervous system. One great reason for this, I think, is that very few women will give the necessary time for the recuperative rest to mind and body. Many women who are inheritors of neuropathic tendencies are attacked by mental disease before the menopause is reached, and are cases of psycho-sensory insanity. They are affected in the moral or emotional part of the mind, while the intellect remains apparently unaffected. It is an insanity of feeling. These women show their mental alienation by a change from affectionate wives, good mothers, and careful housekeepers, to a condition in which they lose all interest in husband, children, and house. Their affections are perverted: they are dissatisfied with everything, and will evince hatred of husband and children, and of those nearest and dearest. Yet the very same woman will join in conversation with strangers with the full command of the intellect, so that a casual or even a careful observer would not imagine that such a case was one of true psycho-sensory insanity. There is a morbid perversion of the affective life and a change in character. The conduct is as bad as possible at home, and fairly good, perhaps, when among strangers. These women are prompt and subtle in finding excuses, and so plausible as to deceive the public respecting their unsoundness of mind. I have seen many such cases during the past fifteen years, and the symptoms I have detailed are perfectly characteristic.

Are the Dangers of High Temperature in Acute Diseases Overestimated?

This was the subject for general discussion at the late meeting of the North Carolina Medical Society. Dr. W. P. Beall believes that if we lose sight of the fact that in typhoid fever the high temperature may be due to the excitement of the system caused by disease-germs, and pour into the patient large doses of quinine, we run the risk of paralyzing the heart. He thinks we are tending too far towards the extreme in the use of antipyretics.

Dr. O'Hagan favors antipyretics when the temperature ranges above 103°. Below that point he gives them sparingly, believing that there is little danger from a temperature under this point. He has even seen a case of typhoid recover after the temperature had remained at 108° for several days.

Dr. J. S. D. Cullen believes if the temperature can be kept down, if only for twenty-

four hours, that this respite will result in ultimate good to the patient. He prefers sponging to the cold bath.

Prof. W. C. Dabney states that when the calibre of the blood-vessels in the skin is lessened, more blood is thrown on the internal organs, thereby augmenting the danger of hemorrhage from the bowels, and this he regards as an argument against the external use of cold water. He does not use antipyrin till the temperature reaches 103°, and then his maximum dose does not exceed 15 or 20 grains.

A Step in the Reform of English Spelling.

Professor Skeat, in a recent number of *Notes and Queries*, says:

"Those who know the whole history of our spelling from the eighth century to the present time best understand the harm done by the pernicious system of trying to transplant Latin and Greek symbols into the English language. The symbols *œ* and *æ* are not English, and are best avoided. Indeed, this is done in practice when once a word becomes common. *Æther and œtherial* have been sensibly replaced by *ether* and *etherial*. No one writes *œternal*. *Solœcism* is now *solecism*, and I trust *primeval* and *medieval* will soon prevail over *primœval* and *mediœval*. Pedantic spellings are most objectionable, because they are useless and unphonetic."

We heartily agree with Professor Skeat, and trust that *diarrhœa, leucorrhœa, dysmenorrhœa*, etc., will soon give place to *diarrhea, leucorrhea, dysmenorrhea*, etc.

—The above is from the *British Medical Journal*. To be consistent, however, the *Journal* must also use *edema, fetus, Cesarean*, etc. The characters *œ* and *æ* are not English, and should not be tolerated in anglicized words.—*Columbus Medical Journal.*

Collodion Coating for Pills.

Instead of keratin, as a covering for pills, pharmacist Bernbeck (in the *Vereinsbl. d. pfälz. Aerzte*) recommends a coating of elastic collodion on account of less difficulty to the druggist in its use. Particularly for naphthaline pills the following formula was shown to be very serviceable:

R. Naphthalini resublimat.,	ʒ iiss.
Rad. althææ pulv.,	gr. lxxv.
Mucil. gummi arab.,	q. s.
Ft. pilul., 100.	

Dry for some days without heat, and coat with elastic collodion.

Sig.—2–3 pills to be taken three times daily.

These pills were proved by physicians to be most excellent for chronic gastric, and intestinal catarrhs, whose existence is shown both by diarrhœa and constipation. The best proof of the serviceableness and proper manufacture of these pills is the fact that they are not rejected by the stomach with eructations of naphthaline gas—a very unpleasant symptom for the patient. The coating of collodion is only dissolved in the lower bowel, the same as with the keratin covering. In order to render the collodion coating permanent, the pill must be absolutely dry, and this condition is shown by the fact that under pressure of the fingers they retain their shape, and crumble rather than flatten. If they contain in their interior the least moisture, the subsequent unavoidable drying and consequent decrease of size will render the adhesion of the collodion only temporary.—*Deutsche Medizinal-Zeitung, May* 2, 1887.

Antipyretic Medication.

F. B. Stevenson, M. D., U. S. N., writes as follows to the *New York Medical Journal* of May 14, 1887:

SIR: The very interesting "Notes on the Use of Opium in Fevers," by Medical Director F. M. Gunnell, U. S. Navy ("Report of the Surgeon-General of the Navy," for 1886, page 85), remind me that I have had strikingly good results from the administration of pilocarpine by the mouth in a case of congestive chills with threatened apoplexy. The chills were checked after a second dose of an eighth of a grain, and a return to health followed. Months afterward the patient died of heart disease. Similar effects could doubtless be obtained by the use of other preparations of jaborandi—for example, the fluid extract. Dr. Gunnell states that "too much quinine is used in the treatment of malarial cases." May it not be that fashion, *sans raison*, is answerable for very much in the administration of this so-called specific? There are yet physicians—thoroughly enlightened and active ones, too—who fail to see the rationale of antifebrile dosing with quinine; their faith lies rather in hygiene and natural forces.

Permanent Sublimate Solutions.

Dr. A. C. Bernays presents the following points of practical value in *The Weekly Medical Review:* It has been noticed by many physicians that solutions of bichloride of mercury very often show a deposit at the bottom of the vessel in which they are contained. Chemical examination of these fluids

shows that so far as antiseptic qualities are concerned they are relatively or entirely inert.

When solutions of this kind are used, either by surgeons in the treatment of wounds, or by gynecologists and obstetricians for uterine or vaginal injections, or by the physician in the treatment of diphtheria, etc., the expected antiseptic results are not obtained. The pharmaceutical chemist, Dr. Stütz, of the University of Jena, has, by a series of most careful experiments, given a method of making solutions of bichloride of mercury, which can be kept an indefinite length of time, and are free from the two obections given above. He found that by adding 7½ grains of citric acid to each quart of water used in making solution of bichloride of mercury, there is no reduction of the $HgCl_2$, and also no precipitate when albuminoid solutions are admixed.

It may be added that solutions made with alcohol or glycerine show the precipitate when diluted with ordinary water, which is not the case if citric acid be added in the proportion mentioned above.

Pain as an Antidote to Opium.

The officers of the Inquisition, years ago, discovered that the most exquisite torture that could be inflicted was by the thumb-screw, or pressure upon the terminal branches of the nerves. Acting upon this hint, the *Medical World* suggests that the physician, on ascertaining that he has a case of opium poisoning, should promptly apply a remorseless pressure to every finger on both hands. This can be done without subsequent injury by winding twine around the last phalanx several times and tightly tying. This will give a pain not unlike a felon on each finger. Rouse the patient occasionally to take some water if possible. Keep the strings on until the patient complains of pain in one of the fingers—find out which one, remove that string, and so on until the last one is off, and yyu have saved a human life. Very few persons need to die from even a very large dose of opium, if seen in time to apply the requisite pain to counteract it.

Therapeutic Equivalents of Salts of Quinine.

According to Boymond, in *Archives de Pharmacie*, the equivalents for 1 part anhydrous quinine are: of the hydrate, 1.16 part; acetate, 1.18 part; basic muriate, 1.22 part; lactate, 1.27 part; basic hydrobromate, 1.30 part; valerianate, 1.31 part; basic sulphate, 1.34 part; neutral sulphovinate, 1.39 part; arseniate, 1.44 part; basic salicylate, 1.45 part; citrate, 1.49; neutral hydrobromate, 1.64 part; neutral sulphate (bisulphate), 1.69 part; hydroferrocyanate, 1.77 part; acid hydriodide, 1.78 part; tannate, 4.42 part; citrate of iron and quinine, variable; brown quinine, variable.

Chlorodyne.

After reviewing the fifteen different published formulæ for this favorite nostrum, the *Western Druggist* commends the formula of Maltbie, given below, as the best substitute for the British preparation:

Morphine hydrochlor. (mur). . .	32 grs.
Alcohol	3 fl. ozs.
Tinct. cannabis ind.	1 " "
Tinct. capsicum	30 minims
Oil peppermint	12 "
Chloroform	1 fl. oz.
Acid hydrocyanic dil.	2 fl. drs.
Glycerin sufficient to make . . .	8 fl. ozs.

Dissolve the morphine in the alcohol, add the tinctures and the other ingredients in the order named.

Peptone Suppositories.

Sauter prepares these suppositories with cacao butter, each containing twenty-five grains of peptone; they are mixed and kept cold to prevent the fat from becoming rancid. In cases where patients cannot be nourished in the normal manner they serve an excellent purpose, fifteen grains of dried peptone equaling two and a half drachms of meat in nutritive value. Children may be given one suppository four times daily; grown persons, two three times daily. The suppository should be lubricated with olive oil, and the rectum be previously cleansed by an enema.

To Paint a "Black Eye."

A writer in the *St. Louis Medical and Surgical Journal* says: for "black eye" there is nothing to compare with the tincture or strong infusion of capsicum annuum, mixed with an equal bulk of mucilage of gum arabic, with the addition of a few drops of glycerine. The mixture should be painted over the bruised surface, a second and third coating being applied as soon as the first dries. If applied immediately after the injury is inflicted, it will almost invariably prevent discoloration of the tissue. The remedy is also of value in rheumatic, sore, or stiff neck.

Microbe of Yellow Fever.

Freire, Gibier, and Rebourgen describe the microscopic appearances and behavior of this bacillus as follows: The microbe is very mobile; it grows rapidly in bouillon when taken from the blood and urine; a dark substance, like black vomit, and having its odor, forms at the bottom of the tubes of culture. Inoculation with the blood of those dying with yellow fever produces an identical disease. Culture liquids undergo spontaneous attenuation in a few days. Inoculations with attenuated cultures have been very successful in the hands of the writers.

A General Tonic.

The following is recommended by Fothergill:

℞.	Quininæ sulph.,	gr. xvj.
	Strychninæ sulph.,	gr. ss.
	Potassii citratis,	ʒ iss.
	Tr. ferri. chloridi,	f. ʒ v.
	Syrup,	f. ʒ j.
	Aquæ, q. s. ad	f. ʒ iv.
M.	Sig.—A teaspoonful three or four times a day.	

Cod-liver Oil Lozenges.

Mayet (*Le Progrès Médical*, April 2, 1887,) communicates to the Société de Thérapeutique his formula for preparing cod-liver oil pastiles without sugar for the use of diabetic patients:

℞.	Cod-liver oil,	f ʒ ss.
	Bicarb. of soda,	ʒ ivss.
	Phosph. of lime (bibasic),	ʒ viij.
	Essence of anise,	gtt. v.
	Gum tragac., q. s. ad 100 pastiles.	

—*The World's Medical Record*, May, 1887.

To Relieve Pain of Cancer of Stomach.

Germain Sée's formula for the relief of pain after taking food in cancer of the stomach:

℞.	Tr. conii,		
	Tr. hyoscyami,		
	Ol. anisi,	āā	f. ʒ ij.
	Tr. gentianæ,		f. ʒ j.
M.	Sig.—Ten to thirty drops after each meal.		

A Sedative Hypodermic Injection.

The following formula is given by Cochrane, who states that its use is without the disadvantages of morphia alone:

℞.	Caffein.,	gr. ½.
	Morph. sulphat.,	gr. ½.
	Atropiæ sulphat.,	gr. $\frac{1}{120}$.
	Aquæ camphorat.,	♏ 20.

Formula for Oil of Male Fern.

℞.	Ol. filicis mar.,	
	Tinct. vanillæ, āā	♏ xlv.
	Syrup. terebinth.,	f. ʒ vj, ♏ xv.
	Gummi arab. pulver.,	gr. xxx.
	Aquæ destillat.,	f. ʒ vi, ♏ xv. M.

This should be taken at one dose, with an equal amount of milk. Castor oil should be given several hours afterward.—*Journal de Médicine*, April 17, 1887.

A Vermifuge Powder.

℞.	Calomel,	2¼ gr.
	Santonine,	1½ gr.
	Sugar of milk,	15 gr. M.

This powder should be given in a little honey in the morning, when the stomach is empty. The dose is for a child four years old.

Unusual Constipation.

Two cases were recently reported at the Louisville Clinical Society—one a young lady, who from girlhood had had a stool but once a month; and a second lady who had an action from the bowels only when she menstruated.

News and Miscellany.

American Climatological Association.

The fourth annual meeting of the American Climatological Association will be held in Baltimore, Tuesday and Wednesday, May 31st and June 1st, 1887, in the hall of the New Physical Laboratory of Johns Hopkins University, Monument St., near Eutaw. The programme is as follows:

TUESDAY, 2 P. M.

Address by the President, Dr. F. Donaldson, Sr., Baltimore.

Subject—Prophylactic Treatment of those who inherit a Predisposition to Phthisis.

The Philosophy of Climatic Treatment of Diseases of the Chest, Dr. James R. Leaming, New York.

An Analysis of 60 Cases of Asthma, with the Result of Treatment, Dr. F. H. Bosworth, New York.

The Influence of Sea Air on Syphilitic Phthisis, Dr. R. G. Curtin, Philadelphia.

Diseased Conditions for which Sea Air is of Doubtful Benefit, Dr. Boardman Reed, Atlantic City.

An Invalids' Day in Colorado Springs, Dr. S. E. Solly, Colorado Springs.

Reception by the President, Dr. Donaldson, from 5 to 8 p. m.

Evening Session, 8 *p. m.*

The Causes of Cardiac Failure at High Altitudes: from Biological Laboratory of John Hopkins University, Dr. Frank Donaldson, Jr., Baltimore.

Some Hospital Cases of Phthisis: Marked Improvement under General Treatment, with special reference to Alimentation, Dr. Fred. C. Shattuck, Boston.

Discussion of Dr. Shattuck's paper; introducing the subject of *Gaseous Injections* in connection with Diet, Dr. E. T. Bruen, Philadelphia.

The Local Treatment of Diseases of the Respiratory Organs, Dr. B. F. Westbrook, Brooklyn.

The Treatment of the Final Stage of Phthisis, Dr. John H. Musser, Philadelphia.

WEDNESDAY, MORNING SESSION, 10 A. M.

Observations upon the Sanitary Advantages of Tide-Water, Va.; including Virginia Beach as a Winter Health Resort, Dr. A. Y. P. Garnett, Washington.

Evergreen Forests as a Therapeutic Agent in Pulmonary Phthisis, Dr. A. L. Loomis, New York.

Environment in its Relation to the Progress of Bacterial Invasion of Tuberculosis, Dr. E. L. Trudeau, Saranac Lake.

The Climate of the Sub-Peninsula Pinellas, Florida, Dr. W. C. Van Bibber, Baltimore.

The Climate of St. Moritz, Upper Engadine, Switzerland, Dr. Walter Platt, Baltimore.

The Climate of Southern California, Dr. H. S. Orme, Los Angeles.

Reception by Dr. W. C. Van Bibber, 1 to 3 p. m.

Afternoon Session.

Business meeting, 3 p. m.

Public session, 3:30.

Report of Committee on Mineral Springs, Dr. Clarence C. Rice, Chairman, New York.

Classification of American Mineral Waters, Dr. A. C. Peale, U. S. Geological Survey, Washington.

St. Augustine as a Winter Health Resort, Dr. F. F. Smith, St. Augustine.

Pass Christian, Mississippi, as a Health Resort, Dr. Charles Le Roux, Pass Christian.

Visit to the Johns Hopkins Hospital.

J. B. WALKER, M. D., Philadelphia.
Seretary and Treasurer.

A Tailed Family.

Seven years ago Virchow, in answer to an inquiry by a correspondent as to a specimen sent, prophesied that among certain little-studied races, Africans, Tartars, etc., tails would be much more frequently found than among the so-called Caucasian (Aryan and Shemitic) races. His prophecy has recently been fulfilled, since a Russian anthropologist has discovered a tailed family, in which the peculiarity has been constantly transmitted to the females for generations. The tail was bony and covered with hair, and on an average three inches in length. Virchow has found, in such tails as he has been able to examine, no true vertebral elements—merely a central cord representing the chorda dorsalis. Embryologists have found nothing but the chorda and atrophied medullary tube in the caudal appendage found in all human embryos at a certain period of uterine life. In the case of a child born at Oldenburg, the tail was mobile and coiled up like a pig's tail. These Russian cases seem to show that there are marked racial differences in the retention of this caudal appendage. The average tail found in the newly-born human being is but a persistence of an embryonic feature, like bronchial slits, hare-lip, etc. There is a prevalent popular belief in the existence of tailed races. Lord Monboddo, a predecessor of Darwin, believed the midwives surreptitiously pinched off the tails of the new-born, and on one occasion he was found secreted in a lying-in-room to watch the midwife. The higher apes, the gorilla, gibbon, chimpanzee and orang are as tailless as man, and the tailed man is either a reversion to a lower type or a mere monstrosity. —*Chicago Medical Standard, May*, 1887.

Faith Cure.

In Chicago there are said to be twenty-seven distinct schools or factions of "mental healers;" but they, together with all other irregulars, will have to pass a satisfactory examination, if a bill now before the Illinois legislature becomes a law. It provides: "Any person shall be regarded as practicing medicine, within the meaning of this act, who shall treat, operate on or prescribe for the sick or afflicted. It is furthermore provided that a fee of $25 shall be paid for the examination of non-graduates, and that itinerant vendors of anything intended for the treatment of disease, or who in any way profess to heal disease by any drug, nostrum, manipulation or other expedient, shall pay a license of $100 a month to the Board."

The Medical and Chirurgical Faculty of Maryland.

At the recent annual meeting, Dr. I. E. Atkinson was elected President; Dr. C. H. Jones and Dr. J. C. Thomas, Vice-Presidents; Dr. G. L. Taneyhill, Recording Secretary; Dr. R. T. Wilson, Assistant Secretary; Dr. J. T. Smith, Corresponding Secretary; Dr. E. E. Mackenzie, Reporting Secretary; Dr. W. F. A. Kemp, Treasurer; and Dr. G. W. Miltenberger, Dr. J. E. Michael, Dr. P. C. Williams, Dr. J. S. Lynch, and Dr. Randolph Winslow, Members of the Executive Committee.

An Ovation to Professor Gray.

Prof. Asa Gray, who is here on a visit, is being made much of by his fellow scientists. On dropping into the University to attend a lecture, the other evening, he was introduced to the students in terms which must have been most trying to his modesty. The students received him with a chorus of "*Prosits!*" which were renewed when he left the lecture hall.—*Vienna Correspondent N. Y. Herald.*

The Maryland Academy of Sciences.

Among the officers recently elected were Dr. Christopher Johnston, President; Dr. Powhatan Clarke, Vice-President; Dr. John Morris and Dr. R. T. Wilson, Members of the Executive Committee; and Dr. R. T. Wilson, Chairman of the Section in Archæology.

The Medical Society of New Jersey.

The one hundred and twenty-first annual meeting of the Medical Society of New Jersey will be held in the Baldwin House, Beach Haven, N. J., on June 14 and 15, 1887, commencing at 4 o'clock p. m. on Tuesday.

Items.

—Prof. Billroth, of Vienna, is seriously ill.

—Dr. William Goodell will remove on June 1st to No. 1418 Spruce street, Philadelphia.

—The sixth annual International Hygienic and Demographic Congress, under the patronage of the Crown Prince Rudolph, will be held in Vienna from September 26th to October 20th. A hygienic exhibition will also be held in connection with the Congress.

—"What about the Monroe doctrine?" was asked of a village candidate. "Oh, well, now," said he; "when it comes to that, thar's jest as good doctors now as thar ever was. All this talk about Bright's disease and Monroe's doctorin' is nonsense. Dr. Buck, standin' thar, is a good a doctor as any uv them."

—The sixtieth annual Congress of German naturalists and physicians will meet at Wiesbaden during the week from September 17th to 24th next. In connection with it there will be an exhibition of the latest improvements in medical, surgical and scientific instruments, apparatus and technical preparations, free of rent or tax of any kind to the exhibitors.

—The Legislature of Pennsylvania has voted appropriations to the Orthopædic Hospital, the Veterinary Department of the University of Pennsylvania, and the Pennsylvania Museum and School of Industrial Art. These appropriations will furnish aid to the important institutions named, which will increase their usefulness and improve their value to the public.

—A complete account of the Pennsylvania Hospital from its foundation in 1751 to the present time is being prepared for publication, and Mr. Benjamin Hoopes, the steward, solicits contributions to the publication fund and information about any documents that may be of use in preparing the history. It is believed that there are many letters, documents, and objects of interest bearing upon the early history of the hospital which may be brought to light if attention is directed to the subject, and the hospital is so closely identified with the community that all who are able to do so will be glad to contribute to the accuracy and value of the record which it is now proposed to prepare and publish.

—"Technics," in speaking of the substitution of electro-plating for cremation, says: The expense is light, and in operations on a large scale could be much further reduced. This would, of course, depend largely upon the metal used. A millionaire could afford to leave himself in golden statu quo for the admiration of his quarreling family. Silver would doubtless come within the reach of plumbers and real-estate men; brass would be quite the thing for politicians, insurance men and such, while tin would be good enough for editors and other poor but honest folk. It goes without saying in what metal a doctor would be encased.

—The following formula has been recommended for sticking labels to glass: Select three or four pieces of gum tragacanth, about the size of a coffee berry, and place in a two-ounce wide-mouthed bottle; then pour over

it acetic acid so as to barely cover the gum, and place the bottle aside until the next day, by which time the gum will have absorbed the fluid and become very much swollen. Now add water, stir well, and in a day or two a semi-transparent jelly will be the result. A drop or two of 95-per cent. solution of the best carbolic acid should then be added, and it will keep indefinitely.

—A common trouble with us all is that we fail in our business because we think little of it. No man truly succeeds in any calling who has a poor opinion of it. No man has a good opinion of his business who uses it only to make money out of it. No man can have the best conception of his business who does not esteem it for its usefulness. And the higher we go—if "higher" and "lower" are proper terms to use in considering the different honorable and useful walks of life—the more clearly will it appear that he who esteems his business only for the living or money that is in it, must, if judged by any high standard, be a failure.—*Dr. Hapgood.*

OBITUARY NOTICE.

Dr. Vulpian.

Dr. Edme Felix Alfred Vulpian, Dean of the Faculty and member of the Academy of Medicine of Paris, died in that city on May 18. He was born on January 5, 1826. He received his doctor's degree in medicine in 1854. He became attached to the Museum of Natural History at Paris, and there continued the researches on the nervous system begun by the celebrated physiologist Flourens. In 1867 he was called to the Faculty of Medicine, as Professor of Pathological Anatomy. At this time the charge of materialism had been brought against him, and the Academy Council, before which Vulpian had been denounced as an atheist, elected him to the professorship by only one majority. In 1868, his teachings were brought before the Senate, and his views in regard to religion were again bitterly attacked. In 1872, he was transferred to the chair of Comparative and Experimental Pathology, and he became the the Dean of the Faculty of Medicine in 1875. He was elected a member of the Academy of Medicine in 1869, and in 1876 became the successor of M. Andral in the Academy of Sciences, one of the branches of the French Institute. He was the author of a number of medical works, his studies being chiefly in regard to the nervous system. His most recent appearance in public was in connection with Pasteur's so-called method for the cure of hydrophobia, of which he was a warm supporter. It was Vulpian who encouraged Pasteur to make the first experiments upon a human being in July, 1885.

Dr. James A. Donelan.

Suddenly, on the 14th instant, Dr. James A. Donelan, Sr. Dr. Donelan had resided in Mills county, Iowa, for thirty-three years, and held an exceptionally warm place in the esteem of the public. He was born in St. Lawrence county, N. Y., in 1828.

Official List of Changes

OF STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY,

From May 15, 1887, to May 21, 1887.

Major Morse K. Taylor, surgeon, retired from active service, May 14, 1887. S. O. 111, A. G. O., May 14, 1887.

R. H. White, promoted to be surgeon with the rank of major, to take effect from May 14, 1887.

Capt. Jno. D. Hall, assistant surgeon, granted leave of absence for one month, with permission to apply for one month's extension. S. O. 74, Dept. Col., May 11, 1887.

William N. Suter, appointed assistant surgeon U. S. Army, with the rank of 1st lieutenant, to rank as such from May 16, 1887.

In the Medical Corps of the Navy, for the week ending May 21, 1887:

Passed assistant surgeon L. W. Curtis, ordered to the Quinnebaug.

Passed assistant surgeon J. W. Baker, ordered to the Hospital, Chelsea, Mass.

Surgeon A. F. Price, ordered to board duty, Annapolis, Md.

Surgeon C. U. Gravatt, detachment from Michigan revoked.

Passed assistant surgeon G. P. Lumsden, orders to the Michigan revoked.

Surgeon C. A. Siegfried, ordered to the Quinnebaug.

Surgeon R. C. Persons, detached from the Saratoga.

Surgeon W. G. Farwell, ordered to the Saratoga.

Surgeon W. S. Dixon, ordered to special duty, Baltimore, Md.

Surgeon B. F. Rogers, ordered to the Marine Rendezvous, N. Y.

Passed assistant surgeon Howard Wells, ordered to the Jamestown.

Surgeon J. C. Wise, detached from the Jamestown.

Surgeon H. H. Harvey, ordered to the Iroquois.

Surgeon J. R. Waggener, detached from the Iroquois.

Dr. S. Stuart White, of Frederick, Md., commissioned assistant surgeon in the navy, May 19th.

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